An Address
ON
MALINGERING, VALETUDINARIANISM, AND THEIR PREVENTION.

DELIVERED BEFORE THE PATHOLOGICAL SOCIETY OF MANCHESTER.

BY

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THE subject of malingering and valetudinarianism and their prevention is of very great practical importance at the present time; it is a large subject of great complexity, in which I have always been much interested. During my first year of practice I was engaged in a big "railway case"; since then I have had a large experience in that kind of practice; as medical officer to a large insurance company which deals with claims under the Workmen's Compensation Act, in the capacity of Medical Referee for Scotland, and as a hospital physician and private practitioner, I have seen many cases in which the question of malingering has presented itself.

DEFINITION.

I would define a malingerer as one who feigns sickness or who deliberately (knowingly and wilfully) induces or protracts an illness, with the object of avoiding duty, claiming money compensation, exciting sympathy, or for any other reason.

You observe that I use the words "knowingly and wilfully." The term "unconscious malingering" is sometimes used; but it is an absolutely erroneous term; the term "unconscious malingering" is a contradiction in terms; the very essence of malingering is wilful and deliberate (conscious) deceit. It is essential to draw a distinction between *malingering*, conscious and deliberate simulation of disease or exaggeration of symptoms, and *valetudinarianism*, unconscious or subconscious simulation of disease or exaggeration of symptoms.

Until recently, malingering was chiefly found amongst: Soldiers; prisoners; schoolboys; conscripts (in those countries where there is universal military service—the reverse condition being not infrequently met with in this country amongst young fellows who have passed the Army examinations, but who have been rejected on their "medical"); hospital patients—"hospital birds" as they are termed; hysterical young women; club patients; persons injured or supposed to be injured in railway accidents; and persons who have been accused of some crime, such conditions as epilepsy or insanity being set up as a defence.

All of us who are engaged in hospital practice will, I am sure, allow that since the Workmen's Compensation Act was introduced* cases of malingering and valetudinarianism have become very much more common. In the last edition of my book on the *Diseases of the Spinal Cord*, published in the year 1895, I discussed in detail concussion of the spinal cord, and referred to the injuries which are so common in pitmen, as the result of falls of stone and coal on the back. I came to certain conclusions as to the nervous symptoms which these patients manifest. I need not read the whole, but my third and fourth conclusions were as follows:

3. That colliers who have suffered from concussion of the spinal cord (I mean, of course, concussion pure and simple) very rarely subsequently suffer from organic disease of the spinal cord or its membranes.

4. That they very rarely indeed manifest the train of nervous symptoms which so frequently occur after railway accidents and injuries.

I then went on to say:

The two last conclusions may in the future be of no small importance, quite irrespective of the subject of railway accidents and injuries with which we are at present immediately concerned. The tendency of modern legislation is to compensate employees who have been injured, provided that the accident is not the result of their own carelessness or error. Now I venture to predict that if the Legislature should enact that colliers are entitled to compensation for the injuries so received, nervous symptoms will in the future be found to result much more frequently from falls of coal and stone on the back than is at present the case.

This prediction has been abundantly verified; my experience during the last five years in the wards of the Edinburgh Royal Infirmary shows that colliers who have been injured in this way very frequently manifest the nervous symptoms characteristic of traumatic neurasthenia or traumatic hysteria. In colliers these nervous symptoms are very much more common than they were five years ago.

Dr. Dickson of Lochgelly, who has for twenty years had a large colliery practice in the county of Fife, stated at a recent meeting of the Edinburgh Medico-Chirurgical Society that traumatic neurasthenia is now a common topic of conversation in the villages of Fife, that the *morale* of the Fife miner, which before the passing of the Workmen's Compensation Act was high, has become much deteriorated, and that the duration of illness after accidents has become much prolonged; he stated that the average time for recovery from a fracture below the knee, which before the introduction of the Workmen's Compensation Act was three months, is now over six months.

It cannot be doubted that the Workmen's Compensation Act has tended to the production of malingering and valetudinarianism. It must, however, be remembered, as a set-off against this, that modern methods of clinical investigation and examination have made it easier than it used to be to detect fraud.

Now I venture to predict that, when the National Insurance Act comes into full operation, malingering and valetudinarianism will become very much more common in cases of ordinary sickness and illness (irrespective of accidents and injuries) than in the past, and the duration of ordinary (non-accidental) illness will be greatly increased, and consequently that there will be a great increase in the medical attendance required, and in the expenditure required for sick pay and allowances during ordinary illness.

Varieties and Degrees of Malingering and Valetudinarianism.

Various varieties or degrees of malingering may be described.

I.

There are cases in which perfectly healthy persons feign disease, induce disease, or claim that they have received an injury and profess to be suffering from symptoms due to that injury.

These cases, in which absolutely healthy persons claim to be suffering from the effects of injury or disease—pure malingering—are, in my experience, extremely rare. They are occasionally met with in club patients, in schoolboys, in hospital patients ("hospital birds"), in accused persons, and in persons who have been in a railway collision or other accident, but who have not been really injured; indeed, cases have occurred in which people who have not been in an accident at all have feigned symptoms, taken to bed, and claimed large damages from a railway company on account of an alleged injury. No case of that sort has come under my own notice, but I have seen several cases in which there has been gross exaggeration or malingering pure and simple.

CASE I.

I remember one case in which a train ran into the buffers at a station; a gentleman who was seated facing the engine was thrown forwards into the arms of a buxom lady who was sitting opposite him; his hat was knocked off and was indented—it was a new silk hat—that was the only damage which he seemed to have sustained. A few days after the accident he began to suffer from the ordinary symptoms of "railway spine"; these symptoms gradually got worse; he brought a claim against the railway company, which was eventually settled out of court for £100.

* The Employers' Liability Act came into force on *January 1st, 1881*. Under it a claim was only sustainable in the event of there being a defect in the condition of the works, or of there being negligence on the part of the employer or those in his service.

The first Workmen's Compensation Act came into operation on *July 1st, 1898*, and was limited to certain classes of employees. An *amending Act* came into operation on *July 1st, 1901*, extending the earlier Act to employees engaged in agriculture.

The present Workmen's Compensation Act came into operation on July 1st, 1907, and practically all classes of employees came within its scope.

The following are brief details of three cases of pure malingering:

Case II.

In the *Times* (June 22nd and 29th, 1899) a case is reported in which a man claimed £500 damages and £33 18s. expenses from the London and North Western Railway Company for injuries received by falling into a hole, which it was alleged was improperly protected, on the platform at the Kensal Rise Station. The company proved that the man was an impostor of the worst possible class, and that no such accident as he alleged had occurred. The man was eventually tried at the Central Criminal Court for trying to obtain money by false pretences, and sentenced to six months' imprisonment.

Case III.

In the *Railway News* (October 29th, 1904) a case is reported in which a man sued the London and North Western Railway Company for £5,000 damages for injuries sustained during the shunting of a train. Out of 500 persons in the train—it was a Saturday afternoon and a very crowded train—the pursuer, who was bumped during the shunting, was the only person who complained of injury or made a claim against the company. From the moment the carriage in which this man was seated was bumped, he set himself to work up a false claim. He pretended to be stunned by the shock, but was sufficiently wide-awake to obtain the names and addresses of two of his fellow passengers, whom he produced as witnesses. After the alleged accident he went into a nursing home and became a cripple, deaf, half-blind, and unable to walk except with a stick, at such times as he thought exhibitions of suffering would help his case against the company.

The company found on inquiry that his record was a very bad one—"his whole business seems to have consisted in obtaining goods on credit under various aliases, selling them and pocketing the proceeds"—and had him watched by detectives. When he thought himself secure from observation, "he was a strong, active man, jumping on and off omnibuses and trains in motion, carrying his own portmanteau and rugs, making trips to Richmond and other places, playing with a football with his children in a park at Brighton, and otherwise making the best of a blighted existence."

After his cross-examination at the trial his counsel closed the case, and the jury found a verdict for the company without calling a single one of their witnesses.

The man was subsequently arrested, tried for perjury at the Central Criminal Court, convicted—the jury not finding it necessary to leave the box—and sentenced to nine months' imprisonment with hard labour

Case IV.

At a recent meeting of the Medico-Chirurgical Society of Edinburgh Sir Thomas Clouston mentioned the following case: A clergyman got into some sexual difficulty. The charge, if proved, would have involved the loss of his livelihood. He pleaded insanity, was certified by two medical men, one of them of very high standing in the university, and sent to an asylum. Sir Thomas Clouston was sent for to see the patient; the asylum attendant informed him that the man spent much time in attentively reading a green-bound book. This book was Sir Thomas Clouston's clinical lectures. In the chapter on delusional melancholia every one of the symptoms which this man manifested was underlined. It is hardly necessary to say that the plea of insanity was not sustained.

II.

There are cases in which, after an accident or injury, the results or remains of previous disease are said to be due to the injury.

These cases are more common than cases of pure malingering in persons who were previously perfectly healthy; fortunately they are not very common, for in some instances they are extremely difficult and perplexing. We all know how frequently functional symptoms are combined with organic disease, and how easy it is to mistake the results of old organic disease for those of recent disease, more particularly in cases in which one is unacquainted with the patient and the previous history, and especially in cases in which erroneous, misleading or false statements are made regarding the previous history and previous condition of the patient. I have met with cases in which a congenital club-foot, a very old-standing facial paralysis, an ear discharge recurring for many years, an old scar on the cornea, epilepsy, tabes and spastic paraplegia were said to be due to recent accidents.

Case V.

We had a case not very long ago in my insurance office in which a severe conjunctivitis was said to be due to dust getting into the eye during the patient's work, but in which it was proved that the patient was suffering from gonorrhoeal conjunctivitis. I do not say that this patient was malingering. I mention the case as an illustration of the difficulty there frequently is in excluding previous disease, and in proving that symptoms, which are said to be due to a recent accident or injury, are in reality the result of previous disease.

There is, of course, a strong tendency in the human mind to try and find a cause for any and every illness, and if a person has received an injury, even some time before the development of an illness, he not unnaturally perhaps attributes the illness to that injury. Poliomyelitis anterior acuta is a striking illustration in point. It is now known to be an infective condition, due to a germ poison; formerly it was often thought to be due to exposure to cold, a chill, or an injury; and in cases of poliomyelitis anterior acuta, occurring as these cases often do in robust, healthy children, nurses were often blamed for supposed injuries to the children in whom the disease developed.

In some cases included under this head the patient knows that the condition which he attributes to the accident was previously present—he is deliberately lying; but in others—as, for example, in cases of early tabes, of which I have seen more than one case—he may not know this; he is not deliberately and wilfully trying to deceive.

In cases of this kind a minute and careful inquiry into the previous history as to the exact nature of the accident—whether the degree and kind of injury was sufficient to account for the symptoms and conditions which are present—will in many cases enable one to arrive at a correct conclusion; but there is often great scope for differences of opinion. In some cases of this kind the difficult question arises as to the relationship of trauma to the causation of the particular diseased condition which is present, such as spinal lesions, cerebral tumour, aneurysm, cancer, and innumerable other conditions which are not infrequently said to be due to an accident.

Then, further, in some cases the question occurs—supposing the man is a diseased man when he gets the accident, is he entitled to receive compensation for the damage he has sustained? In my opinion, one is no more justified in injuring a diseased man than a sound man; but, of course, the amount of compensation which a diseased man should receive is, in many cases, very different from the amount of compensation which a sound man should receive. In cases of this kind the whole circumstances of the case have to be carefully considered and taken into account.

Case VI.

During the first year that I was in practice I met with an interesting case of this kind. A girl, who was carrying a young child subject to epileptic fits in her arms, was larking with a young man; in attempting to strike her, it was said in play, he hit the child; the child immediately had a fit and died in the fit. The young man was committed by the magistrate for manslaughter, and tried at the Newcastle Assizes. I was a witness in the case; I had made a *post-mortem* examination. Mr. Justice Brett, in summing up, laid it down that if the jury were satisfied that the child died from the fit, and that the fit was induced by the blow, they should bring in a verdict of manslaughter; but, he said, the degree of manslaughter was for him to judge, and not for the jury. The jury returned a verdict of manslaughter; the judge discharged the prisoner; he thought that as he had already been some time in prison while waiting for the trial, he had had sufficient punishment.

Cases every now and again occur in which persons who have been apparently perfectly healthy up to the time of an accident die apparently as the result of the accident, and in which it is found after death that they are and have for many years been the subject of grave organic disease. In India many cases have been recorded in which a slight blow has ruptured an enlarged spleen and caused death. The following are cases in point:

Case VII.

A stationmaster received a slight head injury; immediately after the accident he became ill and died a few weeks later, apparently as the result of the injury. Up to the time of the injury this man had never complained of illness; he had for many years performed his arduous duties without ever being off work; he was, however, the subject of advanced cirrhosis of the kidney and marked arterio-sclerosis.

Case VIII.

A labourer, aged 53, employed at the Peterhead harbour works, received an accident—injury to the back, left side, and left leg—by being struck by a skip of stones on August 13th, 1909. He resumed light duty on September 24th, 1909, and some time afterwards returned to full work. In June, 1910, he sustained another slight accident, a blow on the left side; he was off work for a week, and during that time complained of shortness of breath. He subsequently had to leave off work altogether, because of shortness of breath on the slightest exertion.

I examined him on behalf of the Government on August 16th, 1912. He then stated very definitely and positively that up to the time of the first accident he had been perfectly well, and that for the previous ten years he had been employed as a labourer in the Peterhead harbour works and had not been off work through illness for a single day. I found the heart decidedly enlarged and its action irregular, the blood-pressure markedly above the normal (180 mm. of mercury), and a small quantity of albumen in the urine; the pulse was 120. The man complained of pain in the left side and of shortness of breath on the slightest exertion. He seemed to be a straightforward, truthful man.

I gave it as my opinion that his physical condition unfitted him for the work of a labourer. I stated that it was impossible to say definitely whether the disease—the cirrhotic condition of the kidney, which seemed to be the fundamental lesion—was in existence or not prior to the receipt of the first accident; but, whether this was so or not, it seemed obvious that his illness had either been produced or seriously aggravated by the injuries which he had sustained. Consequently, I thought, from a purely medical point of view, that the man was reasonably entitled to adequate compensation.

I have seen many cases of this kind; in some of them it was difficult to determine how far the accident was responsible for the result.

III.

Cases in which patients who are suffering from the effects of an accident or injury or from ordinary illness not due to accident or injury, exaggerate their symptoms, or do not get well as they should be expected to do, but continue to suffer and go on claiming compensation.

These cases are very common—in fact, of every-day occurrence. They are the cases which will give rise to so much difficulty under the National Insurance Act.

In ordinary practice the aim of the patient—at all events, of the great majority of patients—is to get well as soon as possible, and he makes every effort to aid the doctor in getting him well. But if it pays a patient better to be ill than to be well, or if a patient is lazily inclined and is content to take a holiday on sick pay—it may be half-wages—there is no inducement to get well; in fact, there may be an inducement to remain ill—to prolong the illness indefinitely.

In some of the cases included under this head the patient deliberately exaggerates or wilfully prolongs the illness; that, of course, is malingering—partial malingering, I call it. But in many cases the patient simply does not get well and does not return to work, because he has no powerful inducement to get well and to return to work; he goes on complaining for weeks, or it may be months, from symptoms. In many of these cases there is no deliberate intention on the patient's part to deceive; he is not malingering; he is a valetudinarian, not a malingerer.

We all know how very important the influence of hope is in enabling our patients to get well, and how a cheery doctor who expresses a confident opinion that his patients will get well, and who inspires them with hope, does get them well much quicker than another man who takes a gloomy view of things, who shakes his head, and who does not inspire them with hope and confidence.

Any mental anxiety, such as impending litigation, the prospects of the ordeal of a trial, of being examined and cross-examined in the witness-box, retards the patient's recovery. Every one who has had much experience in railway cases knows that these patients never get well, or very rarely indeed get well, until the case is settled, until the litigation is ended; and that they then often get well with remarkable rapidity.

Now, I do not for a moment suggest that all of these patients are wilfully exaggerating or malingering, many of them are perfectly genuine sufferers; they are merely bad cases of valetudinarianism.

CASE IX.

One of the most striking cases of this sort which has come under my notice was that of a man, aged 35, whom I examined on behalf of a railway company, some two years after an accident, in which he had been slightly injured. He was suffering from the most marked symptoms of traumatic neurasthenia that I have ever seen; in addition, there were some symptoms, which time does not permit me to describe in detail, suggestive of organic disease. I pointed out in my report that it was a case in which the patient would probably get heavy damages. He claimed £7,000; he got £3,500. I am informed that this man returned to work a few weeks after the settlement, and that he has apparently been perfectly well and doing his work regularly ever since. Now I saw no reason to doubt that he was an honest man; I did not think he was malingering; I thought, and I still think, notwithstanding the result, that it was a bad case of valetudinarianism and not a case of malingering. At all events, the case shows the important influence which settling the claim, especially if there is a very considerable amount in the way of damages, has in getting the patient well.

I have seen many cases of the same kind in which the symptoms were the result of ordinary accidents and injuries—miners and others who have been injured, and who do not get well until the claim is settled; after which they usually, in my experience, rapidly get well.

Most of us who have had much experience in railway and other compensation cases will, I think, agree that in some cases the lawyers have a good deal to do in fostering these claims and in preventing a settlement. The following anecdote expresses this. There was a bad railway smash in which a few persons were killed, several injured, and many apparently totally unhurt. One of the passengers who was unhurt, while walking down to his office a few days afterwards, was met by a friend, who said, "I was sorry to see you were in that terrible accident; I hope you were not hurt?" The man shook his head, and said, "I don't know, I have not yet seen my lawyer." But the lawyers are not only to blame. I have heard of a medical man who made it his business to hunt up persons who had been in a railway accident, and to coach them up in manufacturing false or exaggerated claims.

The subject of valetudinarianism is one of very great difficulty and of very great importance. In many cases it is quite impossible to differentiate with accuracy and certainty, on purely medical grounds, partial malingering and valetudinarianism, and the other grounds on which one has to make a differential diagnosis are often insufficient to enable us to give a positive and dogmatic opinion. In many cases we suspect malingering, but it is only in rare cases that we are justified in positively stating that a patient is malingering. In many cases, too, it is difficult to say whether a patient is a valetudinarian or not.

In many cases—for example, slight and static valvular lesions of the heart, bronchitis with emphysema, pain and stiffness in the back the result of back injuries, sciatica, or neurasthenia—it is difficult or impossible to say *when* the patient is sufficiently well to return to work. The patient may say, "I am not sufficiently well to work; I still feel shortness of breath on exertion; I still cough and spit; I still feel my leg stiff and painful; I still feel nervous and weak."

Formerly (before the introduction of the Workmen's Compensation Act and the National Insurance Act) many of these patients, especially men with wives and families depending on them, would make an effort to return to work at the earliest possible date. Nowadays there is not the same inducement to get well and to start work, and cases drag on for weeks or months. I repeat that many of these patients are not malingerers; they are merely valetudinarians. These are the cases in which there is likely to be so much difficulty in the future.

The following case is an illustration of the way in which these cases drag on, as the result of valetudinarianism and want of effort on the part of the patients to get well and to help the doctor in getting them well:

CASE X.

A. L., aged 20, was severely burned while at work on May 22nd, 1909. I examined her on April 13th, 1910, and advised that she should go into the Edinburgh Royal Infirmary for treatment; systematic exercises, injection of fibrolysin, and passive movements were employed, and she was discharged on June 22nd, very much better. I again saw her on September 26th, 1910; extensive cicatrices the result of the burn were present on both arms; those on the right arm did not interfere with its usefulness, those on the left arm and hand made the fingers somewhat rigid. The patient at this date claimed to be totally and permanently unfit for work; I reported that she was fit for light work, and if she only made an effort to use the left hand she would in the course of time be fit to do ordinary work. The patient received compensation at the rate of 10s. a week from the date of the accident—May 22nd, 1909—till November 13th, 1910. The case was then settled, £55 being given in a lump sum in addition to 10s. a week which she had received in the way of compensation.

In connexion with this part of the subject, the question arises whether a patient who refuses an operation which has been advised for the cure of his disease is entitled to go on receiving compensation for his illness. It is a difficult question for the insurance companies, for if they

were to insist upon an operation, and if the patient should happen to die as a result of that operation, they would obviously incur a very grave additional responsibility. The following is a case in point:

Case XI.

A quarryman, aged 30, received an injury to the right elbow (a cut), the result of a fall in the quarry, on July 9th, 1908. The ulnar nerve had evidently been divided. There was weakness and wasting in the small muscles of the right hand, and some loss of sensation in the area of distribution of the right ulnar nerve. I saw him on February 4th, 1909, and advised that he should go into hospital for observation and treatment. The question of operation—cutting down on the divided nerve and suturing the two ends—presented itself. The patient refused operation. Improvement gradually occurred under medical treatment. The claim was ultimately settled on September 24th, 1909, the man receiving £27 10s. as damages.

There are, of course, cases in which the Workmen's Compensation Act and the National Insurance Act are godsends. Over and over again I have seen patients—say, with organic heart disease—decent hard-working men with wives and families dependent on them, insist on being discharged from hospital before they were fit to return to work, with the laudable object of supporting their dependants. Those are the cases which one desires to see insured—and well insured—well compensated and well looked after, medically and otherwise. I know of no sadder case than that of a man who insists on being discharged from hospital in order to support his wife and family, when one knows that the hard laborious work and strain to which he must subject himself will, in the course of a short time, be certain to result in another breakdown. These cases will still, I fear, be too frequently most inadequately provided for.

The cases of malingering which most frequently occur in physicians' practice are nervous cases; they are by far the most common and by far the most difficult cases. Purely surgical cases are, comparatively speaking, rare; the ophthalmic surgeon sees a large number of cases; the aurist a few cases; the dermatologist some cases. I have seen several cases in which skin lesions have been deliberately produced by young women, some, but not all, of whom were hysterics.

Diagnosis.

The diagnosis of malingering is often extremely difficult; it has to be based partly on medical and partly on collateral evidence.

It is, of course, a more difficult thing to recognize that an article is adulterated than to recognize the genuine article. It is unnecessary to say that the success of the malingerer depends upon the exactitude with which he is able to represent the medical picture. I could feign many diseased conditions, such as an epileptic fit, an attack of angina pectoris or insanity, so perfectly as to defy detection. Fortunately for diagnosis, malingerers are very rarely skilled and experienced in the conditions which they attempt to represent; they usually overdo their part.

It is very difficult to feign organic disease; it is the functional conditions which are easily simulated. Consequently, the first thing in making a diagnosis in a case of suspected malingering is to make a careful medical examination and to exclude organic disease.

In nervous cases the differential diagnosis of organic and functional disease, unless one is specially skilled and experienced in nervous disease, is often very difficult. One sees this in private practice in cases in which there is no question of compensation and no suspicion of malingering. One sees cases in which experienced hospital physicians and surgeons differ with regard to these cases, in which one man says that there is, and another there is not, organic disease. Many cases of this kind have come under my notice. Let me give you two striking illustrations:

Case XII.

A female, aged 21, single, a domestic servant, was admitted to the Edinburgh Royal Infirmary on November 10th, 1911, suffering from great difficulty in walking, due to shortening and contracture of the left leg. The history was that two years previously she had fallen down a flight of stairs and received an injury to the hip and back. For some weeks after the injury she went on working, but with great difficulty. She then was admitted to a large hospital; the surgeon under whom she was admitted diagnosed the condition as organic disease of the left hip-joint; she was discharged five weeks later, a heavy boot with a big sole and high heel being prescribed. For eighteen months she remained in the same condition, complaining of her hip and walking with great difficulty. She was then sent to see my son, Dr. Edwin Bramwell, by Dr. Garnett Wright, who with Dr. Edwin thought the condition was functional.

On examination it was found that the left leg was 3 in. shorter than the right; there was very marked twisting of the pelvis and great deformity. The condition appeared to me to be purely functional; but I thought it well to have a surgical opinion. I asked Professor Alexis Thomson to see the case; he was unable to do so until the beginning of December; until this date, therefore, nothing was done in the way of treatment. At Professor Thomson's suggestion two *x*-ray photographs were taken; the first seemed to show that the neck of the right femur was very decidedly shortened; this appearance, however, was fictitious, due to foreshortening in the photograph; the second photograph showed that the left hip was absolutely normal. Professor Thomson agreed that the case was purely functional, the shortening being due to a functional contracture.

On December 7th, 1911, the patient was placed under chloroform; the two legs were found to be the same length and have remained the same length ever since. The patient was told she was now perfectly well and would be able to walk in the course of a short time. A week later she was running up and down the long ward and was completely restored to health. She has remained well ever since.

Case XIII.

A female, aged 19, single, was admitted to the Edinburgh Royal Infirmary on June 3rd, 1911, suffering from inability to open the mouth. Two and a half years previously a molar tooth on the left side was extracted under cocaine; the patient fainted when the cocaine was injected; half an hour later the jaw became rigidly closed and had so remained ever since. A month after the contracture developed a dentist opened the jaw and kept it open with a gag for a short time; a fortnight later she went into a large hospital under the care of a distinguished surgeon; the jaw was, she says, scraped and a gag was placed in her mouth to keep the jaw open; this treatment was ineffectual.

On examination, nothing abnormal except the rigid contracture of the jaw muscles, was found. The condition was diagnosed as a functional contracture. The patient was told that there was no organic disease and that we would speedily cure her. She was isolated behind screens, and was given hypodermic injections of H_2O. On June 14th she could open her mouth as wide as she had ever been able to open it. She has since remained quite well.

These are two remarkable cases. Had they come into court it cannot be doubted that both patients would have received heavy damages, and that laymen would have jeered at the difference of medical opinion. The point I wish to make is that these differences of opinion are constantly occurring in private practice, and that the differences of opinion which so frequently occur in courts of law are in many cases honest differences, and due to the difficulty in diagnosis which many of these cases present. Let me give a striking case in point—a case in which the late Sir William Banks, who all of us who knew him will agree was as honest and reliable and truthful as he was experienced, made a grave diagnostic mistake.

Case XIV.

A man, aged 30, fell from the mast of a ship in January, 1902, and sustained a severe injury to the lower part of the back. He was awarded £1 a week as compensation. In April, 1904, my insurance company—the Scottish Union and National—applied at the Liverpool County Court for the review and diminution of this weekly payment. It was stated that unless the case were reviewed this man, aged 32, might go on drawing this compensation of £52 a year for the next forty years, and the sum of £2,000 which would thereby be involved was very substantial compensation for an accident, the compensation for which, had the man been killed outright, would have been only £300.

Professor Paul and Sir James Barr were called on behalf of the insurance company. They stated that, in their opinion, the man's bent condition and general crippled appearance were due to a mental delusion on his part, and not to any organic change.

Sir William Banks was called on behalf of the man, who appeared to be a perfect cripple, and could only walk with the assistance of crutches. Sir William Banks had no reason to think that his condition was due merely to a mental delusion on his part; he thought that he was suffering from a chronic inflammation of the bones and joints at the bottom part of the spine, and that they had become so fixed that they would not properly unbend. He was of opinion that, in all probability, the patient would never be again fit for the kind of work he had hitherto followed, but he might, in time, sufficiently recover to do some light work. He did not think the man was shamming. In July, 1910, the claim was settled for £600; £571 had been previously paid in compensation and costs.

The patient continued to go about on crutches until June 13th, 1911. He was then cured "like the shot of a gun," to use his own words, by bathing in the holy well at the shrine of

St. Winifride. For eight years he had been hobbling about on crutches; when he got out of the water he was able to walk back to the hospice, leaving his crutches in the crypt of the well.

He was seen by an inspector of the insurance company on August 12th, 1911; he then looked the picture of health, was upright, was walking at a quick pace, and was able to walk several miles a day driving sheep.

Now, if experts differ in this way, it is impossible to expect the ordinary general practitioner to come to a correct conclusion as to the nature of many of these most difficult cases.

Then there are diseased conditions, some of them very serious, which the most expert and experienced physician is unable to detect—such, for example, as small, deep-seated thoracic aneurysms (which even the *x* rays may not disclose), and disease of the coronary arteries, with severe angina pectoris. I have seen cases of this sort in which it was impossible to detect any definite evidence of organic disease in which the patients have died from the condition soon after my examination.

In those cases of suspected malingering in which there are symptoms or signs of organic disease—I am speaking more especially of cases said to be due to accident or injury—one has to make sure, as I have previously stated, that the organic lesion was actually due to the accident or injury, and that it was not present before the receipt of the injury. A careful inquiry into the previous history will usually enable us to determine this point. In cases of partial malingering it is often impossible to say how far the symptoms are genuine and due to the results of injury or to the organic disease which is present, and how far to malingering and wilful exaggeration on the part of the patient.

Certain things show that there is organic disease—such, for example, as localized muscular atrophy, the reaction of degeneration, paralysis of the sphincters, acute bedsores, the Babinski sign and ankle clonus (if perfectly typical and persistent, and not merely temporary and evanescent), complete loss of the knee-jerks on reinforcement, optic neuritis and optic atrophy, definite changes in the cerebro-spinal fluid, "skew-deviation" of the eyes. It must, however, be admitted that apparent exceptions to some of these statements are sometimes met with. Paralysis of the sphincters, for example, which is usually a very definite sign of organic disease, was said to have been present for six weeks in the case of the man who got £3,500 damages, to whose case I have already referred—that was one of the things in the case that we thought positively indicative of organic disease.

Let me here say a word or two with regard to the value of electrical tests in cases of paralysis. Some people seem to think that one can differentiate paralysis and malingering by means of electrical tests. That, of course, is not the case. It is hardly necessary to say that in many cases of permanent paralysis the paralysed muscles respond actively to the faradic current. At the last meeting of the British Medical Association there was a discussion on the Medical Training for the Detection of Malingering,[1] and the gentleman who introduced the discussion is reported to have said:

> Other numerous examples of the many varieties of malingering could be given—for instance, cases in which joints, though freely flexible to passive are apparently rigidly fixed to voluntary movement, and cases in which muscles, though apparently paralysed, readily respond to the faradic current, are so common as not to be worthy of discussion in detail.

In other words, that statement implies that if a paralysed muscle contracts to the faradic current it is not paralysed. There must be some error in the report, for I cannot conceive that the gentleman who introduced that discussion could possibly have made such a statement. In a recently published book on malingering, equally erroneous statements as to the effect of electricity in cases of paralysis and of the value of electrical tests in the diagnosis of malingering are made.

Then, again, it is sometimes concluded because a stiff joint or a contractured limb relaxes under chloroform and the joint is normal that the case is one of malingering. I have seen many cases, and published some of them, in which rigid contractures, due to functional nervous causes, have lasted for weeks and months and years, in which the contractures have been relaxed under anaesthetics, and the condition has been rapidly and completely cured by appropriate treatment (a confident opinion that there was no organic disease and that the patient would rapidly get well, together with isolation, the electric current, and hypodermic injections of H_2O). Cases XII and XIII are striking illustrations.

Modern methods of research, such as electricity, the *x* rays, the perimeter, are often, I need hardly say, of very great use in the differential diagnosis of obscure cases, in differentiating functional and organic disease, and as an aid to the detection of malingering. The following is a case in point:

CASE XV.

A girl, aged 13, complained of blindness. She appeared to be in robust health. Ophthalmoscopic examination showed that the fundus was perfectly normal; there was no headache and no vomiting; with the exception of the impairment of vision, there were no symptoms. Careful examination with the perimeter showed the presence of a central scotoma. Dr. George Mackay, who kindly examined the patient, diagnosed a retrobulbar neuritis, an exceedingly rare thing in an apparently healthy young girl aged 13.

Corroborative non-medical evidence is the second class of evidence which one has to trust to. If a nervous case presents unusual symptoms which one cannot explain by a syphilitic or other apparent cause, one suspects malingering, more especially if the patient has anything to gain by deception.

In cases of this kind one has to lay traps to detect the deceit. I have the records of some railway cases in which the patients have been watched by detectives, the malingering proved, and the supposed patients convicted either of perjury or of trying to obtain money by false pretences (see Cases II and III).

One of the ordinary tests which one employs in cases of nervous disease is Romberg's test; it is not of great value, because inability to balance the body steadily in the erect position may be due to psychical causes or to weakness as well as to inco-ordination, and because it is so easily simulated. In employing Romberg's test in cases in which one has reason to suspect deceit I take care to see that the patient does not know what I am testing. I tell the patient, for example, that I am going to see whether he can hold out his hand steadily, and then, when his eyes are shut and his feet close together, bring the tip of his forefinger accurately in contact with the tip of his nose—the finger-nose test. I show him what I wish him to do. I see at once whether he has Rombergism or not. He thinks I am testing his ability to touch his nose, whereas I am testing his ability to stand steadily in the erect position with his feet close together and his eyes shut. That is an example of the sort of trap one sets; an experienced observer gets into the habit of using many dodges and traps in cases of this kind. Everything that the patient does and how he does it, both during the examination and when he does not think that he is being observed and examined, should, of course, be noted.

CASE XVI.

At the Glasgow meeting of the British Medical Association the late Professor Grainger Stewart showed a most remarkable case—an old woman who had an epileptic fit whenever she went into the dark. Professor Grainger Stewart took her to Glasgow in a first class carriage, and he told the meeting that she had a fit in each of the tunnels. The case attracted much attention. Shortly after the meeting I one day followed this patient into the surgical entrance of the hospital; she went down the stairs, immediately inside the entrance, into a very dark corner, struck a match, and lighted her pipe. She was very indignant when I asked her why she had not had a fit.

Now, from what I have said it will be apparent that there are many cases in which one suspects malingering, but there are few cases in which one can definitely certify that a patient is a malingerer. As pointed out in an article in the *Times* of November 7th, 1912, the panel doctor who certifies that a patient is malingering assumes a grave responsibility, and if he makes a mistaken diagnosis runs a great risk of a complaint being made against him, and of getting into grievous trouble and of having his name struck off the panel. In giving certificates one should be very careful in the wording of the certificates; except in very clear cases, one should avoid definitely stating that the patient is a malingerer; in doubtful cases one should say that, "So far as my examination, knowledge, and experience enable me to judge, the patient is fit to return to work," or, "So far as I am able

to detect, there is no organic disease and the patient is able to return to work." The doctor who is asked to certify whether a patient is malingering ought to be perfectly independent of the result.

Repeated examinations are often necessary in order to determine whether a patient is suffering from functional or organic disease, and whether he is malingering or not. The German plan of obliging these doubtful cases to go into hospital, in order that they may be under skilled observation and repeated examination, is a good one.

The Prevention of Malingering.

In order to prevent malingering under the National Insurance Act I would suggest:

1. *An exhaustive medical examination by the panel doctor.* The only sure means of detecting malingering is careful medical examination and careful medical observation by a competent doctor. In cases of prolonged sickness and in cases of repeated sickness the patient's fellow workmen no doubt often become suspicious, but the malingering may have gone on for weeks or months before that suspicion is aroused. In most cases malingering can only be detected in its earlier stages by the medical attendant.

2. *In doubtful cases consultation with a specialist.* The panel doctor must be protected, and the only way to protect him is by giving him the opportunity of calling in an expert to decide upon the nature of the case and to give a certificate. The consultant must be a specialist in the particular department of medicine or surgery which is concerned in the particular case; a physician, for example, who has no special knowledge of nervous disease cannot give a reliable opinion on a difficult nervous case; a surgeon cannot be expected to give a reliable opinion on a difficult eye case or ear case.

The expert should be perfectly independent of the result, and these experts should, of course, be properly paid.

In the *Times* (November 9th, 1912) Dr. F. C. Mears suggests that "in every case where the evidence of disability rests solely on the word of the insured person, he should be compelled by law, at the expiration of a fortnight's sick benefit, to appear before a quorum of not less than half the doctors on the panel of his district, and if the decision of this tribunal is final and without appeal, malingering will die out in a very short time." In my opinion, a quorum of half the doctors on the district panel would be very unwieldy. A committee of three would be surely sufficient. But why should all this additional gratuitous work be put upon the already underpaid panel doctors? Further, the panel doctors are not experts, and it is the opinion of experts which in difficult cases is required.

3. *Observation and repeated examination in hospital in doubtful cases.*

4. *A time limit to the purely functional cases and in cases in which there is no obvious organic disease.* In cases of neurasthenia, for example, the patient ought not to be allowed to go on drawing pay indefinitely. A certain time limit should be laid down. The patient should be told that there is no organic disease; that, medically speaking, he is quite fit to work; that unless he goes back to work on a certain day the money payment will cease. This plan would no doubt entail a real hardship in some genuine cases of functional disease, such as neurasthenia—and there are many such—but I am afraid this hardship must be faced.

It would be exceedingly difficult to lay down a time limit in cases in which there is organic disease—in a case of organic heart disease, for example, in which, as I have already pointed out, it is often exceedingly difficult to decide whether the patient is fit for work or not. But in cases in which there is no obvious organic disease I would certainly suggest that there ought to be a time limit.

In some countries the patient who claims sick benefit has to make a direct money contribution towards such sick benefit; if such direct contribution is sufficient in amount, it will, of course, stop much malingering and much valetudinarianism. Unfortunately, under the National Insurance Act no money contribution is required except the weekly payments which all insured persons have to make.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, August 3rd, 1912, p. 222.

REMARKS ON MALINGERING.

BEING AN INTRODUCTION TO A DISCUSSION OF THE SUBJECT AT A MEETING OF THE LEICESTER DIVISION.

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Introduction.

We may regard malingering as a fraudulent attempt to obtain pecuniary benefit or exemption from work or duty on the plea of some assumed, misrepresented, or exaggerated disability, illness, or injury. There is no doubt that during the last few years malingering has increased among industrial workers. It was formerly chiefly prevalent in the army, the navy, and the pauper class. Apart from the pecuniary loss to employers of labour and to insurance societies, and the demoralizing effect of successful malingering on the person who makes the fraudulent claim, malingering injures society as a whole, because unjust claims tend to increase the amount of the premium demanded by insurance societies against the risk of accident and illness.

It is necessary to remember that a claim may be false without being fraudulent. It may be founded on a genuine although mistaken impression concerning the presence of certain symptoms and disabilities without any intention to obtain benefit by fraud. Everything depends on the motive. We must bear the motive in mind when considering the undoubted increase in the number of persons who, since the commencement of the Insurance Act, have consulted doctors on the panel for slight ailments which, under ordinary circumstances and before the commencement of the Act, would have been disregarded. That the motive underlying this increased request for medical advice is not in many cases fraudulent is shown by the fact that the majority of the patients seeking advice do not cease work or claim sickness benefit. The novelty of the situation created by the Act and the desire to ascertain whether medical benefit under the Act is bona fide has no doubt operated in some cases.

Moreover, this early seeking of medical advice has its beneficial side from the public health point of view. Experience in Leicester and other towns already shows that in some cases the detection of serious illness which would have otherwise escaped recognition has been brought about by this means.

The Psychology of the Individual in Relation to Malingering.

It is important to remember that the fraudulent misrepresentation of symptoms and disabilities which constitutes malingering shades off into a genuine but exaggerated idea of the importance of slight symptoms.

The attitude of mind which underlies malingering is not confined to the working classes.

Owing to a false notion of the status of public bodies, and to a false idea of what should be the normal relationship of the individual to the State, it has come about that individuals, in all classes of society, take up an attitude, in regard to claims against public authorities or the Government, different from that which they would think it right to adopt towards a fellow citizen. This desire to get all that can be got when entering a claim against an insurance office or a railway company is partly the result of a predatory habit of mind natural to some persons, and partly the outcome of an evolutionary struggle between individual and group interests, and partly, no doubt, to the reluctance of some companies to grant even legitimate claims except under compulsion.

Nevertheless, it is important to realize that deception in regard to the payment of income tax or the exaggeration of a claim for compensation against a public company or the Government, may be just as much a form of malingering and just as fraudulent as an attempt on the part of a workman to obtain compensation or to avoid work by the exaggeration of the symptoms of a disease, or the effects of an injury contracted during employment.

It is probable that the effect of recent legislation (for example, the Workmen's Compensation Act, 1906, and the National Insurance Act, 1911) will be to increase malingering in England as like legislation has already increased it in Germany and France. Thus Ewald[1] states that the

large number of nervous workmen in Germany in whom the thought of compensation has become a fixed idea is giving anxiety to German legislators, while M. A. Brissaud in France describes a new disease "Psychical Accident" as the result of the French accident law of 1898.

Checks.

In view of these facts it is very important to check this growing tendency to malingering and the exaggeration of disabilities by:

1. Making the presentment of fraudulent claims difficult and unsuccessful, and in some cases a punishable offence.
2. The formation of a more enlightened public opinion concerning the right relationship of the individual to the community, and the education of all classes of society in the duties and responsibilities of citizenship.

Legal Influences which Promote Malingering.

Every medical man who has had any experience of accident and disease in connexion with industrial life must have realized that what we may call the fraudulent or predatory attitude on the part of some claimants for compensation is frequently strengthened if not manufactured by interested societies and unscrupulous persons. A bona fide wish to put in a reasonable claim grows and develops under the stimulating influence of a speculative action at law into an overpowering desire to obtain a victory even at the expense of justice, and when the obtaining of a verdict means the aggrandisement of needy and unscrupulous persons the danger of injustice is very considerable.

Other factors of a medical kind also play a part. The chances of legal success in any complicated case are undoubtedly increased by the gaps which still exist in medical and surgical knowledge, and by the contrary inferences which are drawn and the different opinions which may honestly be formed by different medical men about the same medical facts, all of which differences may be magnified and distorted by opposing legal parties.

It is at any rate probable that out of the 48,565 claims for compensation in 1911 under the Workmen's Compensation Act, a larger proportion would have been settled out of court were it not for the influences of a legal kind which were brought to bear upon needy and, in some cases, not too honest claimants.

It seems probable, therefore, that there is a need for the genuine, as contrasted with the speculative, poor man's lawyer.

The Position of the Doctor in Regard to Malingering.

Apart from the guardianship of his own interests, the medical man is in a position of a public servant whose duty it is to protect society against fraud in his special field of work. In carrying out this duty the less the medical man is penalized or affected by considerations of self interest the better for the community.

Thus, in regard to this question of the detection and suppression of malingering, the doctor tends to be influenced by:

1. The risk of offending his patient and his patient's family.
2. The method by which he receives remuneration for his services—that is, whether by capitation fee or by payment for services rendered.

The first difficulty can be best overcome by the appointment of medical referees (not on the panel) under the Insurance Act, whose duty it should be to examine and report upon cases of unusually prolonged illness and doubtful claims for benefit.

It is true that the Medical Service Subcommittee, with its equal number of medical men and representatives of insured persons, and its independent chairman, affords some machinery for the hearing of complaints between doctors on the panel and insured persons; it is not probable, however, that this body will be much used, or will be of any great value in checking malingering, in which the problem is not only the detection of the confirmed malingerer, but the bringing of considerable numbers of insured persons into more reasonable mental attitudes about symptoms to which they attach undue importance, and in regard to claims for sickness, disablement, and other benefits to which they erroneously think they are entitled.

The problem is how to bring this salutary influence to bear in an early stage, and in an authoritative way, before any definite complaint has been formulated on either side. This can be done most efficiently and with least friction by the appointment of medical referees (as suggested by Sir John Collie).[2] If overlapping is to be avoided and an authoritative tribunal is to be secured, these referees must be appointed either by the whole of the approved societies conjointly in any district, or by the Insurance Committees in conjunction with the societies, or by the Commissioners.

The second difficulty can be met by the adoption of the method of payment per caput, though this has other disadvantages. It certainly tends to increase the work thrown upon hospitals.

Every social, municipal, and legislative forward movement which tends to promote the preventive and public health side, as opposed to the commercial side, of medical practice reacts beneficially on the public conscience; it helps to discountenance that peculiar mental attitude which tends to magnify individual disabilities, which seeks to obtain immediate relief of symptoms by short cuts and patent medicines, and which exaggerates the importance of individual claims.

One of the strongest arguments in favour of gradually building up a unified, State-controlled public medical service is, that such a national health system would relieve those upon whom the burden of providing funds for hospital and institutional treatment now falls, of the fear of the loss of annual subscriptions. But it would do more than this—it would raise the status of the practitioner of medicine, it would make him a member of the Civil Service and place his interests and his work on a firmer basis. He would be able to give advice and treatment with the single object of promoting in his patient a physiological way of life, and he would be unhampered by any anxiety about possible resentment on the part of the patient towards himself and his advice.

Additional Safeguards Against Malingering.

1. The periodical oversight of insured persons in receipt of sickness and disablement benefit by visitors appointed by approved societies. (The term "visitor" may possibly include medical visitors and thus possibly provide for the appointment of medical referees.) This, although provided for in the model rules issued by the Commissioners, is permissive, and has not been adopted by all societies.

2. The issue of rules by all societies providing for the compulsory medical examination—and, if necessary, re-examination—of all cases of unusually prolonged illness and in cases in which it appears probable to the officials of the society (or to the medical men on the panel or to the Insurance Committee) that unfair claims for benefit are being made. In this way the working of the Insurance Act would be brought into harmony with the provisions of the Workmen's Compensation Act, which provides in Section 14 for the compulsory examination and re-examination of persons claiming compensation.

3. Some system of registration showing in any case the total amount of sick pay and pecuniary benefit received, and the proportion which this bears to the average wages when at work. In regard to this point, however, it is necessary to recognize the undoubted right of every workman, like every other citizen, to obtain pecuniary benefit and exemption from toil by thrift—that is, to insure up to any extent that he may think desirable so long as it is clearly understood that this extra insurance does not carry any peculiar right to sickness or disablement benefit by the misrepresentation of some disability, or to obtain idleness by the misuse of public funds.

4. Another difficulty relates to the rigidity of the rule which in many cases forbids partial employment and insists on total disablement during the receipt of benefit. Any attempt to test recovery by a return to partial work entails the loss of the right to further compensation or benefit. Benefit and compensation, in fact, do not, like illness, reach a maximum and gradually decline; they begin suddenly and end suddenly. Hence the reluctance on the part of the workman and his legal adviser, and in

some cases his medical adviser, to declare off the funds. No doubt the administrative difficulties in the way of granting partial sick benefit and allowing partial disablement under the Insurance Act are very great, but here also the appointment of medical referees with discretionary powers, subject to revision on appeal in certain cases, might possibly provide a partial solution of the difficulty.

5. Finally, much depends on the attitude of medical men themselves, and the extent to which they realize that the interests of the doctors on the panel in any area are corporate interests, and that if one practitioner is over-lenient and careless in the matter of prescribing and signing certificates, all his colleagues will be affected, not only by the extra drain on the funds available for medical benefit, but also by the false standard which is thereby set up in regard to demands by insured persons on the time and attention of other medical men.

Reference.
[1] *Traumatic Neuroses and the Accident Law.* [2] *Malingering.*

A PLEA FOR MEDICAL REFEREES VERSUS INSPECTORS.

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The following suggestions are based upon considerable experience of the practical working of the Workmen's Compensation Act, and are made with a view to minimizing abuse of the sickness and disablement benefit clauses of the National Health Act.

The attitude of the profession with regard to suggested "inspectors" under the Act is hostile, but judging from interviews I have had with medical friends who are working the Insurance Act I believe the profession would welcome the appointment of medical referees under the Act, whose duty it would be to assist the medical men on the panel to put down malingering, and thus to safeguard the funds available for sickness benefit.

I believe that in a short time from their appointment the assistance of such officials, whose functions I am about to suggest, would be largely in requisition in doubtful and difficult cases, provided it is made abundantly evident from the beginning that they are appointed not to report on the conduct of the medical men, but on the conduct of the assured, and that their *raison d'être* is solely to assist the medical men who are working the Act in dealing with cases of suspected malingering.

The approved societies might fairly be expected to pay towards the remuneration of these officers either an annual sum, or so much per consultation, and would find—as has already been found in Germany—the saving much greater than the cost.

The difficulty of deciding whether a patient is incapable of work is a very real one. It arises in two classes of cases:

1. Those who consider themselves incapable of work, but are in fact able to do it.
2. Those who are capable of work, know it, and yet are determined to remain on the sick list as long as they dare.

In practice it will be found that the funds of the approved societies will be depleted from both these sources, and probably to a much greater extent by the former.

The first class is the more difficult to deal with. Its size is scarcely yet appreciated by the friendly societies or by those who are responsible for the administration of the Act. It embraces many who are often erroneously called "malingerers"; it includes a large proportion of those who are known in the law courts as "traumatic neurasthenics," and not a few of those known in the out-patient departments of hospitals as suffering from "functional nerve disease." It embraces a great number of complaining people who have no special temptation to remain in idleness, and who, until the passing of the Act, were in receipt of no special sick benefits. It is certain that there will be a considerable increase of unnecessary medical attendance if these people are allowed indefinitely to take advantage of the sick benefits under the Act.

Experience of a small selected group of employees in the public service showed that strict supervision reduced the total number of those whose illnesses lasted more than twenty-eight days by 50 per cent.

In men the condition is usually associated with an obscure want of mental balance and an apparent loss of courage and feeling of manliness. I fear it will be found in even greater proportion amongst the female operatives who come under the benefits of the Act.

Generally speaking, medical practitioners treat these complaining folk sympathetically, and assume their genuineness, and, even when doubts arise, accept and treat them as cases of chronic illness. Yet the majority are curable. If they are not treated energetically at an *early* stage they tend to become chronic, and a proportion lapse into true malingerers. This class is peculiarly responsive to its environment and are very reflective of the mental attitude and personality of their medical attendant. I feel assured that medical referees, if appointed, would have a vast influence for good in a multitude of these cases which are bound to be exceedingly troublesome to doctors on the panel and very costly to the committees unless properly dealt with. The medical referee's influence, however, will entirely depend upon whether he works in co-operation with the doctor on the panel.

A single consultation will be found, as a rule, not sufficient. Patients of this type do not give up the fetish of ill health at the single bidding of any one. Two, three, or even more visits with the doctor in attendance may have to be made before the assured is successfully led out of his morbid mentality.

Subjective sensations in those predisposed to introspection have a peculiarly demoralizing effect on many of the working classes. Unless at an early stage in their history these unfortunate people are led out of themselves long periods of time are wasted in supposed helplessness, which, apart from the economic aspect of the loss of their labour, must have a debilitating effect upon the character not only of those concerned but of their associates.

The subjoined table is extracted from the 62 cases of functional disease which I recently sent to the Maida Vale Hospital for Nervous Diseases. All were settling down to chronic invalidism, and had they not been isolated from their sympathetic friends and environment, would have been pensioners for life. The cases represent a class which, unless it is recognized and grappled with, will entail an enormous amount of unnecessary medical attention, and will be a fruitful source of annoyance and irritation to hard-worked practitioners.

With regard to the second class—those who are capable of work, know it, and yet are determined to remain on the sick list as long as they dare: Out of 14 million insured persons, the aggregate number of malingerers is likely to be considerable.

The question is one of diagnosis. The natural antipathy that every practitioner has to accuse of fraud those who have trusted him will, at first at any rate, tend to influence the number of those who complain unnecessarily. Medical men as a rule are not on the outlook for simulation of disease. They are accustomed day by day to treat people who are genuinely ill, most of whom they have for years had good reason to trust, and often it is not until the case becomes wearisome and the fraud is irresistible that the idea of malingering is forced on the busy practitioner. When diagnosed, the question resolves itself not so much into a matter of treatment as a battle of wits. Under these circumstances most medical men will dislike the position in which they will find themselves. If, therefore, friendly societies, local committees, or the Government require this sort of work done, then special assistance should be put at the disposal of the practitioner, and medical referees, whose primary duty it is to look after the business part of the contract, should be appointed.

Experience teaches that a considerable proportion of insured persons who, after receiving compensation for accidents under the Workmen's Compensation Act, have been forced back to work either by the arbitration courts or threats of arbitration proceedings, will, after a few days' half-hearted work, again put themselves on the sick list. It is to be feared that in these cases, where

Occupation.	Nature of Illness.	Days of Disablement prior to Entering Hospital.	Days in Hospital.	Result of Hospital Treatment.
A. A., clerk	Neurasthenia; obsession of diabetes	163	58	Returned to work after fortnight in country.
A. B., seaman	Alleged injury to back	302	51	Resumed work.
A. C., surveyor ...	Neurasthenia complicated with alcohol	56	26	Returned to work.
A. D., carman	Typical traumatic neurasthenia; gave himself up to introspection	434	45	Resumed work.
A. E., stevedore ...	Alleged traumatic neurasthenia	6 years 8 months	42	Satisfied nothing the matter; discharged from hospital; weekly payments stopped; county court proceedings; judge and medical assessor decided fit for work.
A. F., seaman	Functional neurosis; back kept at almost right angle	612	45	Resumed work as a seaman.
A. G., tram driver ...	Treated for myelitis for 13 weeks, full pay most of time; ordered to hospital, where he had fits, blackening his face to give them realistic effect	426	70	Interview in hospital; plain speaking; walked to my house, distant 1 mile, the next day; resumed work within a week.
A. H., engine driver...	7 years previously off work whole year with strained back; now having been off work 9 months with back again said to be strained, was sent to me for examination with a view to superannuation; sent to hospital for observation	9 months	11	Told he would be reported as a malingerer and lose pension if he did not immediately resume work; left hospital next day, resumed light work, six weeks later resumed full work, and has been at it the last five and a half years.

compensation has been stopped, further attempts will freely be made to claim sick benefit under the National Health Act, by the simple process of attempting to give the alleged disability a medical instead of a surgical nomenclature. For instance, a workman who has had a not very serious injury, but who has suffered from concussion at the time of the accident and has been much shaken, eventually recovers; his wounds heal, and he has all the physical appearance of health; but he is still somewhat nervous, has lost the work habit, is introspective, and refuses even to attempt work of any kind. By threats of, or it may be by actual legal process, the employer shakes off his liability, and the workman, at last aroused to his responsibilities, obtains temporary light work for a few days. This under the circumstances is naturally distasteful. He is full of complaints, but has none of the usual stigmata of disease; he insists he is weak, declares he simply cannot work; his illness is now called "neurasthenia," "general debility," or, what is much more likely, he exalts some *symptom* such as neuralgia, indigestion, etc., is successful in getting a medical certificate of unfitness, and becomes a more or less chronic patient, and wastes the time of many a hard-worked practitioner for months, it may be for years.

Those accustomed to dealing with illegitimate prolongation of disabilities following accident will appreciate how, under certain circumstances, much ingenuity is likely to be spent in trying to persuade medical men to transfer an alleged illness from the category of *accident* to *disease*, and thus become a pensioner on the National Insurance Fund.

If such a scheme as I indicate were to work successfully, the advice of such experts as I advocate will not require to be forced on, but will be actually welcomed and applied for by the doctor in attendance.

I believe the appointment of medical referees cannot be long delayed. Assuming that the notice of a suspected case reaches a medical referee not from the doctor in attendance, but from either the Insurance Commissioners, the Insurance Committee, or an approved society, his first and invariable duty would be to put himself in communication with the doctor in attendance. If this is not done antagonism would at once be aroused, and very rightly a spirit of opposition fostered which would be fatal to the success of the scheme.

One difficulty likely to arise will be where large approved societies employ their own medical referee, who sees assured persons not at their own houses, but either at the society offices or at his own consulting room, and where a considerable number of cases are daily submitted to the medical officer, under some such rule as that adopted by the London County Council and the Metropolitan Water Board, whereby every such case is certified by the chief medical officer every twenty-eighth day. Under these circumstances it would be impracticable to ask or expect the practitioner in attendance to meet the medical referee. Yet this difficulty can be got over; the doctor in attendance in every instance would be communicated with prior to the medical referee seeing the case, and a clear statement made in writing that his patient is being interviewed solely for the purpose of the medical referee reporting progress to the Commissioners, the Insurance Committee, or the approved society, that no opinion will be expressed to the patient, and no suggestion of treatment will be made to the patient.

In the event of difficult points arising it should be the duty of the medical referee to call upon the doctor in attendance and discuss the matter.

With regard to the question of the selection of the medical referees. The personal qualities of sound judgement, absolute integrity, and fearless independence are of infinitely more value than academic distinction. Nor do I think that mature age is necessarily a qualification which should have undue influence in the selection of men to fill these posts—given the qualities above referred to, many comparatively young men are often well suited for work of this sort.

The difficulties are: That approved societies would probably be unwilling to pay sufficient remuneration to command the best men; that they might be found to be lacking in sufficient judgement to make a proper selection; and that local influences and prejudices might lead to the selection of members of the profession known to members of the elective body, but who are not the best candidates. The professional status of the medical referee is a matter of much moment, and he should, in my opinion, have the status and emoluments of a Government servant.

If it were decided to appoint whole-time officers, and these were made responsible to the Insurance Commissioners, some arrangement might be made whereby they were assigned wide areas, which would in many ways tend to maintain their independence. Small boards of referees would, with little difficulty, be constituted for difficult cases in large centres.

A difficulty which the Government is sure to have, and one with which a staff of trained medical referees could best grapple, is the question of "incapacity for work" as opposed to the suggestion—so often made—that because a man cannot work *at his work* therefore he is unfit for any work.

Further, the medical referee would be particularly useful in cases of disablement benefit. I think probably there is much reason to fear that a large number of frauds and semi-frauds will be perpetrated in this connexion. I speak from experience, for of the first 80 cases presented to me for examination when I acted as chief medical officer to a society, 40 returned to duty forthwith at my instigation, many of whom had been drawing sick pay for long periods.

Many pensioners could be saved entering upon chronic

invalidism if treated firmly at an early stage, but when weekly payments have been made for periods extending over months it will be considered an "injustice" to withdraw it; it will, therefore, be necessary at a very early stage to have these cases visited and reported upon, preferably by independent medical men. For this purpose a medical referee visiting staff would be particularly useful.

The practical experience of the working of the Asylum Officers' Superannuation Act, 1909, is of assistance in this connexion. It will be remembered that Clause 3 (subsection 1) of this Act provides for the re-examination of pensioners at intervals of a year. As medical officer appointed under the Act for the County of London, I can well appreciate the difficulty a medical man is in when asked to revise at intervals the advisability or otherwise of continuing a pension in which the pensioner considers he has a vested interest, merely because so many antecedent weekly or monthly payments have been made.

For these and other reasons which the exigencies of time and space prevent my setting out in further detail I have formed the opinion that medical referees should be appointed. Their coming is inevitable. Their advent will be welcomed. The sooner they are arranged for the better for those members of the profession who are about to wrestle with difficulties which I know well, for the special nature of my work compels me to encounter them daily.

STUDIES ON BERI-BERI.

FURTHER FACTS CONCERNING THE CHEMISTRY OF THE VITAMINE-FRACTION FROM YEAST.

By CASIMIR FUNK,

BEIT MEMORIAL RESEARCH FELLOW.

(From the Biochemical Department, Lister Institute.)

[WITH SPECIAL PLATE.]

At the end of 1911[1] I described a method for the isolation of the vitamine-fraction from rice polishings. At this time only a single substance was detected, which was studied to some extent in its chemical properties and curative power. Early in 1912[2] I was able to show that the same method might be successfully used for the isolation of the vitamine-fraction from other foodstuffs, namely, milk, yeast, brain, and lime juice. Even at this time it was noticed that the isolated pure substance of the melting point 233° had a slightly diminished curative power as compared with the crude product. As a second substance at that time could not be isolated, there was no explanation of this fact available. Since then I have been able to show[3] that a number of purin and pyrimidin derivatives possess a slight curative effect—a very interesting fact, which, however, did not simplify the problem.

It was therefore conceivable that besides the substance of the melting point 233°, small quantities of other substances might be present in this fraction, the physiological effect of which therefore would be the resultant of the individual actions of these constituents.

A fractionation of the yeast extract was therefore carried out on a large scale and the results of this are shortly summarized in this preliminary communication.

The alcoholic extract of 100 kg. dried yeast was prepared, following the method already described in my earlier papers. The fractionation itself was carried out without any change of methods and only the silver and baryta fraction which represents the vitamine-fraction was carefully investigated. The total amount of substances obtained in this fraction from 100 kg. of dried yeast was 2.5 grams. This initial product was crystalline and melted at 210° (uncorrected).

A number of pigeons were treated with this product. Polyneuritis was induced in them by artificial feeding with an exclusive diet of polished rice. After a time, varying from ten to twenty-one days, they developed the characteristic symptoms of avian polyneuritis, as they are represented in the figures 1, 3, and 5. By a series of controls it was found[4] that the animals in this condition live rarely longer than six to twelve hours, twenty-four hours being perhaps the utmost limit. The product mentioned above was injected into the pectoral muscle in quantities varying from 4 to 8 mg. and in each case a complete recovery was obtained (Figs. 2, 4, 6). Before and after treatment the animals were kept on an unchanged diet of polished rice. In spite of that they lived after the recovery for four to six days without any symptoms of neuritis. As the food did not secure a new supply of vitamine, the birds developed neuritis again after the injected substance was apparently used up for metabolic processes. In one of these cases after a new supply of substance a second cure was effected.

CASE I.—Severe symptoms of polyneuritis; 4 mg. of the above-mentioned product were injected into the pectoral muscle. Three hours later a great improvement; next day a complete recovery; four days later shows again symptoms, and dies.

CASE II.—Severe symptoms (Fig. 1);* 8 mg. injected. Two hours later a complete recovery (Fig. 2); was able to fly away, and had to be photographed, therefore, in a cage; relapsed after six days, and was again cured by a new injection of the product.

CASE III.—Severe symptoms (Fig. 3); injected 4 mg. Recovery after three hours (Fig. 4); lived for four days.

CASE IV.—Polyneuritis (Fig. 5); injected 8 mg. After three hours a complete recovery (Fig. 6), which lasted for four days.

We see from these experiments that the initial vitamine-fraction possesses the undiminished curative power of the original yeast extract. As in some cases the change of diet alone (an addition of maize, for instance) is capable of improving very markedly the condition of the sick birds, the fact that an unchanged diet of polished rice was kept throughout the experiment cannot be too much emphasized.

By a further fractionation I was able to separate the crude fraction into at least three substances, each of which has been carefully purified (recrystallization till constant melting point) and analysed. The original product (2.5 grams) yielded the following substances:

Substance I.—1.6 grams, melting at 229° (corrected); needles and prisms nearly insoluble in cold water. When mixed with the substance previously obtained from yeast[2] it does not show any depression of melting point; the substances might therefore be regarded as identical.

Substance II.—0.4 gram, very soluble in cold water, and gives a difficultly soluble picrate. The substance melts at 235° (uncorrected).

Substance III.—0.3 gram, more soluble in water than the first substance; melts at 222° (uncorrected).

These observations have an interesting parallel with the case of pituitary extract, as recently recorded by Führer,[4] where also in the first instance a crystalline fraction was isolated, which showed the whole physiological action of the gland, but on further fractionation was found to consist of not less than four different substances. Each of these had a specific action, but the effect of the original product could only be obtained by the collective action of all the four substances. It will be interesting to see whether the same is the case with the vitamine-fraction, or whether a single substance plays a preponderating part in the process of cure.

For therapeutic purposes, therefore, the best results may at present be expected by a paraenteral administration of the whole vitamine-fraction, especially in acute cases which have proceeded too far to be influenced by a change of diet—in such cases, for example, as have been described by Strong and Crowell[5] and Schüffner.[6] This fraction which is suggested to be employed contains the active constituents unimpaired of the original starting material, and is free from any harmful substances.

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[3] Casimir Funk: *Journ. of Physiol.*, xlv, 489, 1912.

[4] Führer: *Deut. med. Woch.*, March, 1913, p. 491.

[5] Strong and Crowell: *Philipp. Journ. of Sc.*, August, 1912.

[6] Schüffner: *Muench. med. Woch.*, 1913, p. 642.

* The photographs have been kindly made for me by Dr. A. B. Macallum, jun., to whom I would like here to express my thanks.

CASIMIR FUNK: BERI-BERI (POLYNEURITIS) IN PIGEONS.

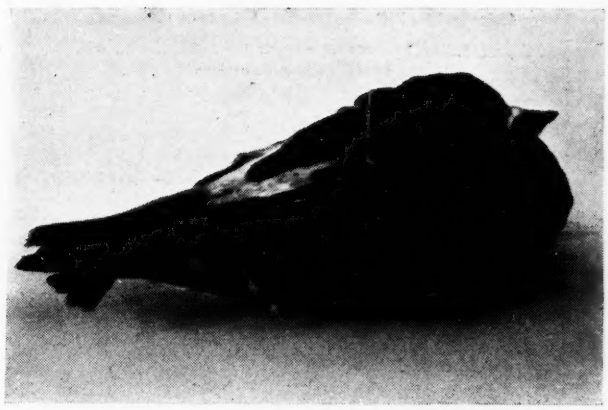

FIG. 1.

FIG. 2.

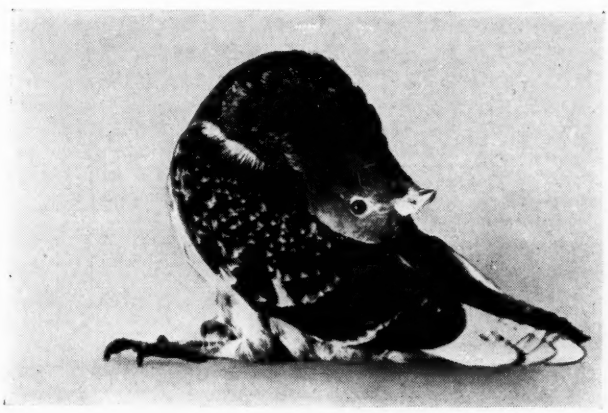

FIG. 3.

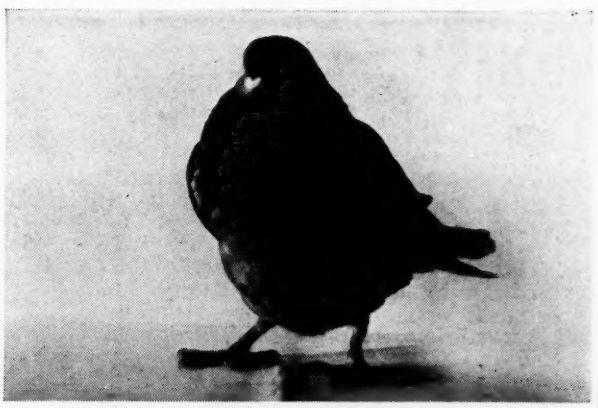

FIG. 4.

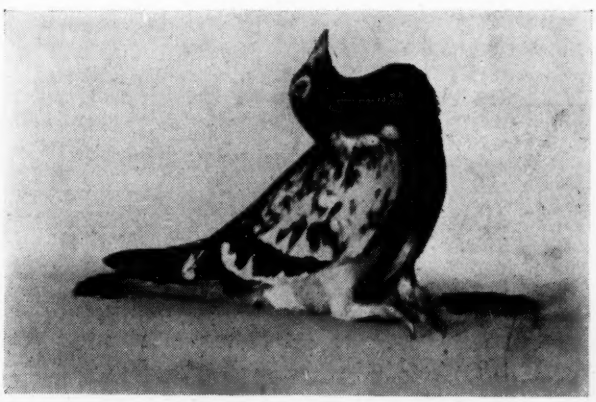

FIG. 5.

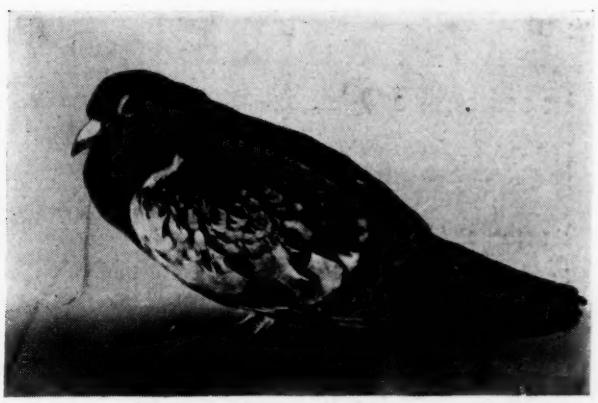

FIG. 6.

ALIMENTARY TOXAEMIA.

PAPERS READ AT THE ADJOURNED DISCUSSION AT THE ROYAL SOCIETY OF MEDICINE.

CUTANEOUS INDICATIONS OF ALIMENTARY TOXAEMIA.

BY JAMES GALLOWAY, M.D., F.R.C.P.,
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FROM the days when we were house-physicians, the occurrence of alimentary toxaemia, as the term is understood in this discussion, must have been familiar. Many of us may recollect the occasion when we were called to the casualty department late on a Saturday evening and found awaiting our services a vigorous looking young man, whose features were scarcely recognizable on account of an outburst of severe urticaria. We found on inquiry that his week-end dissipations had been stimulated by a diet of stout and winkles, and our judgement as to the cause of the urticaria was supported when we found that the best treatment in such cases was the administration of an emetic, followed by a copious black draught. No doubt remained in our minds that the urticaria was due to alimentary toxaemia, caused by poisons absorbed from his alimentary tract.

In such a case as this the relation in time between the disturbance of the alimentary tract and the visible indication of disease is so close that their causal relationship is admitted by all. But in the case of most other indications of intestinal and visceral disturbance the relationship between the probable cause and its manifestation cannot be so easily traced. Even with the knowledge now at our disposal as to the nature of the poisons derived from various fermentative processes, the chain between cause and effect cannot be distinctly demonstrated; mathematical methods of proof are not applicable, so that all we have to offer in support of our beliefs are the conclusions drawn from individual or collective clinical experience. Nevertheless, little doubt is left in the mind of the clinician that causal relationships do exist, and it may be well to point out at this time some of the more obvious external signs of disease of the alimentary tract.

The poisons capable of producing toxaemia resulting in these manifestations of disease seem to come from two sources: first, those contained in the food itself or arising from the food by the action of ferments in the alimentary tract—these ferments may be those normally produced by the various accessory glands or may have some abnormal origin owing to disease or other causes; secondly, those resulting from fermentative or putrefactive processes due to the action of organisms which may be normal denizens of the alimentary tract or interlopers. Most of the external manifestations seem to be more easily traceable to the first group of poisons rather than to the second, though this may very possibly be due to the fact that the noxious consequences of the action of many of these organisms, such as bacteria, are more difficult to appreciate and to trace to their original source.

The outward manifestations group themselves easily in four main categories:

1. Those resulting from disturbances of the blood vessels which disappear leaving no permanent trace. In this category may be grouped the varieties of urticaria, evanescent or of long duration, the types of erythema, including exudative and vesicating forms.

2. Morbid conditions in which an inflammatory lesion progresses to actual infiltration of the integuments with cellular elements and terminating in persisting deformity such as dilatation of blood vessels, atrophy, persistent dermatitis, ulceration, and scarring.

3. Purpura in its different forms—punctate, diffuse, and often associated with other haemorrhagic manifestations.

4. Pigmentation due to increase or abnormal distribution of pigments closely related to those of the normal type, such as melanin, or in other cases to pigments more recently derived from haemoglobin and due to haemolysis resulting from the circulating intestinal toxins.

GROUP I.

Of the first group, the various forms of simple or acute urticaria are by far the most common. The relationship between the ingestion of an unusual article of food such as shellfish or certain fruits, with the consequent outburst of urticaria, is so close as to leave no reasonable doubt that the poisonous material is contained in the ingested substance, or is very easily elaborated from it by the digestive ferments. A little more difficulty is felt when dealing with other varieties of the disease, such as the recurring type of urticaria, in which the lesions are usually not so severe or extensive as in the acute single attack, or the chronic variety, in which the lesions are usually diffusely scattered, though not large individually and leave indurated lesions, giving rise to the term "papular urticaria." These papules not infrequently develop long-standing pigmentation, and may even resemble the rare condition known as "urticaria pigmentosa," of which the exact morbid relationships are still unknown.

In reference to the causation of these less common types of urticaria, the connexion between ingested poisons and the production of the lesion is not so easily traceable, but information gathered from clinical investigation strongly indicates the existence of the connecting chain. For instance, in one case it may be discovered that some individual article of food little suspected to be the cause has by a process of elimination been at length excluded from the dietary. As soon as the sufferer denies himself this treasured delicacy, the troublesome and long-standing urticaria disappears. Also, although the treatment of the chronic and papular varieties of the disease is by no means satisfactory, and often very disappointing in its results, the largest amount of success follows treatment by careful selection of the diet—sometimes by restriction of proteins, at other time by refraining from carbohydrates, accompanied by treatment adapted to keep the alimentary canal in a healthy state.

The relation between the various forms of erythema and alimentary toxaemia is more obscure. That such a relation does exist is borne out by the clinical experience of the causation of some of the simpler forms of erythematous eruption.

Take, for example, the simpler types of non-exudative erythema. It is well known that such outbreaks are apt to occur after the disturbance of the lower bowel and its contents by the administration of injections, or as a consequence of lavage of the rectum and colon. The cause in this case is not likely to be due to absorption of the fluid used for purposes of washing out the bowel, but to substances pre-existing in the alimentary tract, or rapidly formed in consequence of the interference with its contents. The material absorbed into the body producing attacks of erythema in cases such as these may, with some degree of likelihood, be ascribed to the effects of bacterial decomposition. No doubt, at any rate, exists in our minds as to the causal relationship of the erythema and the administration of the injection. It is reasonable, therefore, to suspect that other conditions of the large intestine, such as those produced by disease of the mucous membrane, may manifest themselves by erythematous eruptions on the surface, and as a matter of observation simple erythematous eruptions are by no means infrequent in the course of the various forms of inflammation of the bowel. These outbreaks are very apt to be purpuric.

The types of erythema exudativum in which, in addition to dilatation of the capillaries, escape of the contents of the vessels occurs into the tissues—either the blood serum or the blood cells—are by far less common than the simple erythemas. We are less likely, therefore, to observe the association between eruptions of erythema exudativum and affections of the alimentary tract, but that the relationship does exist in many cases is more than probable. The close connexion between outbreaks of exudative erythema and diseases of internal organs has frequently been noted and emphasized by various writers, and the toxaemia producing these attacks may arise with greater probability from the alimentary canal than from other viscera. Instructive examples are quoted by Osler and other observers.

The general impression given by clinical observation of this group of external manifestations is that the urticarial type is more frequently produced by the direct absorption of noxious ingesta or as a consequence of the more simple

chemical changes in foods occurring in the upper portion of the alimentary tract from the action of the natural alimentary ferments; while eruptions of erythematous nature more frequently arise from affections of the intestines, especially the large intestine, in which the terminal processes of digestion take place, the poisonous materials involved being of a more subtle character, or perhaps due to the results of fermentations produced by bacteria or other organisms. The purpuric types of erythema seem especially to indicate that the changes occur in the colon or large intestine.

GROUP II.

The external lesions which we have been considering are those due to vascular phenomena, which leave no permanent trace behind. Closely allied to these lesions are certain others in which, in addition to the erythematous condition, tissue changes occur. Of these the criterion is the appearance of new cellular elements—neither red blood cells nor white blood cells, but newly formed cells, characteristic of various types of inflammatory infiltration. When these new cells are observed destructive tissue changes must occur in some degree, though it may be very slight, and as a result we may observe erythematous lesions with the same symmetrical disposition as some of the others we have discussed, but which do not vanish, leaving as their result atrophic, or even ulcerating, destruction of the surface. The type of this morbid state is the disease usually known as lupus erythematosus—a condition closely resembling in its distribution erythema multiforme, but terminating in some degree of destruction or atrophy. The etiology of this mysterious affection is by no means well understood, but its connexions with visceral disturbances should never be overlooked. A good deal of attention has been drawn to its peculiar relationship with certain forms of disease of the kidney. In other cases a poison arising from the alimentary tract may be suspected of being the cause. A characteristic example is as follows:

A woman of about 35 years of age came under observation with an acute outburst of lupus erythematosus affecting symmetrically not only the face but also the extremities and the trunk, accompanied by fever and much constitutional disturbance, resembling, therefore, the well-known type of the disease sometimes called "exanthematic lupus erythematosus." The duration of this case was about three years. The investigation into the possible causes of the disease were at first unfruitful, but soon it was noted that the patient was gradually developing the signs and symptoms of cirrhosis of the liver. It was not, however, till well on in the course of her malady that it became known that the patient, who in all other respects was exemplary in her social behaviour, secretly indulged in alcohol to an excessive degree.

Such cases occurring in the course of medical experience naturally give rise to the belief, and indicate with a good deal of certainty, that certain forms of alimentary toxaemia may result not only in such conditions as hepatic cirrhosis or fibrosis of the kidneys, but also in the outward and visible sign of a chronic inflammatory erythema, ending in induration or atrophy of the skin. In this relationship notice should be taken of numerous cases in which permanent dilatation of blood vessels results in the production of the different clinical types of telangiectases or even of angiomata. A good deal of attention has recently been given to the different forms of these permanent vascular lesions. Some of them seem to occur almost certainly as the result of circulating poisons affecting the blood vessels mainly. They are frequently seen in cases in which cirrhosis of the liver and kidneys have followed toxaemia arising in the first instance from the alimentary canal.

GROUP III.

The probability of alimentary toxaemia being the cause of certain cases of purpura has long been recognized clinically, for the connexion between the outburst of purpura and the disturbance of the alimentary canal is sometimes so close that it gives as clear evidence of their relationship as the outburst of urticaria following the eating of some unusual article of food. This relationship is well seen in some of the cases producing the type of the disease known as Henoch's purpura. Many purpuric lesions arise no doubt by a peculiar development or simply by intensification of the conditions already noted producing erythema. They form, however, on account of their aspect so characteristic a group that they claim special attention.

One of the most remarkable conditions in which the connexion between poisoning from the alimentary tract and the outburst of purpura is shown is in certain stages of hepatic cirrhosis. In these cases of cirrhosis, sometimes at an early period of the disease, a patient is attacked by a violent outbreak of purpura, the lesions occurring throughout the body affecting large areas and showing profuse extravasation of blood. These outbreaks are often associated with internal haemorrhages most commonly from the lower part of the bowel. Such attacks of purpura seem to occur in the early stages of obstruction to the portal circulation caused by the contracting of the newly formed connective tissue in the liver. As a result the portal blood containing the crude materials absorbed in the alimentary canal is forced to seek collateral channels to regain the general systemic circulation. Much of it returns directly by means of the vena cava, thus closely reproducing the conditions established by the well-known porta-caval fistula of Eck. The blood returning by these newly formed channels of circulation carries with it the products of intestinal digestion, or possibly abnormal noxious substances due to the impaired action of the alimentary canal. Under normal conditions the liver is the organ in which these materials are further elaborated, thereby being rendered innocuous, or are destroyed, but in the unusual conditions produced by portal obstruction the tissues, the blood vessels, and the blood itself are poisoned for the time being. It is under these circumstances that certain exceedingly violent attacks of purpura arise, and they strongly suggest the causation indicated. It is not surprising to find that haemorrhages from the bowel are associated with these purpuric outbreaks. New channels are being discovered by the returning blood, such as those uniting the superior and inferior haemorrhoidal vessels and the radicles of the internal iliac vein; extravasation is likely to occur under these circumstances from the dilated blood vessels quite apart from the noxious effects produced on the tissues by the abnormal constituents of the blood. In such a case the attack of purpura may be the first indication drawing attention to the visceral and intestinal disease. Complete recovery of the haemorrhagic symptoms may occur, the patient being even able to resume his usual work in life. The cirrhosis of the liver, of course, remains, or gradually progresses, but the gland apparently resumes its functions as the purifying organ of the portal blood to a sufficient extent to protect the body, or the tissues of the body succeed in protecting themselves in some other way against the action of the poisoned blood. It is likely that the poisonous materials producing these changes in the tissues and in the blood are the results of the ordinary digestive processes or the simpler forms of chemical decomposition rather than of bacterial fermentations.

Another variety of purpura presents small haemorrhagic areas of petechial or punctiform lesions. The relationship between this condition and alimentary toxaemia is very distinctly shown in the variety of disease to which the name of "Henoch's purpura" has been given. An instructive example occurred in the case of a young girl, who presented herself for treatment two or three years in succession with attacks of intestinal pain, melaena, haematuria, and numerous purpuric lesions. On every occasion the attack followed an autumn visit to the country, and the eating of unusual foods, such as berries and nuts.

The same type of purpura is very familiar in association with chronic inflammatory conditions of the colon, such as the varieties of colitis and dysentery. The attacks are especially prone to appear when other evidences of toxaemia or septicaemia become prominent.

There are grounds for associating the type of purpura characterized by large areas of cutaneous haemorrhage with absorption of poisons from the upper part of the alimentary tract. These poisons may arise from infected food materials or may be produced by the normal, or only slightly abnormal, processes of intestinal digestion. The petechial and punctiform types of purpura, on the other hand, appear to occur as the result of the terminal

digestive changes or abnormal fermentative processes occurring in the lower reaches of the bowel, possibly influenced by the micro-organisms present i the alimentary tract. This is the type of purpura most often seen in cases of severe septicaemia which seem to be traceable to the pyogenic inflammations of the mouth, gums, or naso-pharynx.

GROUP IV.

A fourth group of the visible manifestations of alimentary toxaemia includes the abnormalities of pigmentation. The unhealthy, dusky discoloration of the skin occurring in various forms of indigestion is a matter of ordinary observation. Much attention has been drawn in the course of this discussion to the discoloration occurring in the cases of disease to which the name of "intestinal stasis" has been applied. It is difficult to be quite sure of the exact nature of this pigmentation. It is partly due, no doubt, to disturbances of the circulation, producing unusual conditions of opacity or translucency of the skin, but in other cases, no doubt, it is due to a definite increase in the amount of the pigments, identical with, or nearly related to, the normal skin pigment. The cases, however, which are most striking are those in which the pigmentation is due to unusual or abnormal pigments.

The first to which reference should be made is the peculiar yellow tint, probably resulting from severe haemolysis, followed by liberation of haemoglobin in the blood serum, and the formation of pigments, of which urobilin is one. This haemolytic, or "urobilin jaundice," as it is sometimes called, is well seen in the severer forms of anaemia, many of which are associated with septic disorders of the alimentary tract; the poisoning in these cases, giving rise, as one of its consequences, to abnormal haemolysis, is probably of bacterial origin. It is very usual to find these haemolytic changes associated with obvious purpuric lesions.

The most striking of all the varieties of abnormal pigmentation is seen in the cases to which the name of "haemochromatosis" is given. The pigment in this condition is not so close a blood derivative as is urobilin, and probably more than one variety of pigment may be present. Of these a pigment still containing iron has been identified with some certainty, to which the name of "haemosiderin" has been given, while another pigment free of iron is known as "haemofuscin." The staining and discoloration of the tissues resulting from the formation and disposition of such pigments is often of a most remarkable character. In some cases it is of a pronounced slate-black colour, while in others the tint is a full mahogany brown. There can be no doubt also that the depth of the pigmentation may vary from time to time in the same case. The relationship between some of these cases of haemochromatosis with poisoning arising from the alimentary tract is very close. Cases are on record in which inflammatory conditions involving the abdomen and interfering with the action of the intestine have coincided with the development of the slate-black pigmentation already mentioned. The discoloration may show itself on the surface of the body in a degree which can scarcely be imagined unless the opportunity has arisen of seeing such a case. In one such case recovery from disease affecting the intestine following operation was accompanied by the gradual disappearance of discoloration of the most intense character. This patient was well, in vigorous occupation and health, several years after treatment.

On the other hand, the type of disease associated with enlargement of the spleen, progressive loss of health, with severe anaemia and frequently with repeated discharges of blood from the bowel, and in which cirrhosis of the liver occurs as a terminal feature, shows pigmentation of the red-brown tint. In a case presenting these features the pigmentation of the surface was of a pronounced mahogany-red colour.

In this category may also be included the cases of discoloration due to alterations in the haemoglobin to which the names of "methaemoglobinaemia" and "sulphaemoglobinaemia" have been applied.

In many of these abnormal pigmentations the relationship to alimentary toxaemia is a close one—probably that of cause and effect.

D

CHRONIC INTESTINAL STASIS.

BY

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ASSISTANT PHYSICIAN TO GUY'S HOSPITAL.

As my contribution to this discussion I propose to examine the evidence on which a diagnosis of toxaemia due to chronic intestinal stasis can be made. It might be gathered from what some clinicians have said that it is possible to make a diagnosis from the symptoms alone. If, for example, we could accept the statement that chronic intestinal stasis is "a necessary antecedent factor" in the development of all forms of tuberculous disease, the discovery of tubercle bacilli in the sputum would logically lead to a diagnosis of chronic intestinal stasis. Few, however, will agree with a statement for which so little evidence has been brought forward. Even the symptoms, which are by common consent regarded as characteristic of chronic intestinal stasis, are by no means pathognomonic. The worst case I have ever seen of intestinal toxaemia, in which the classical symptoms of extreme emaciation, extensive pigmentation, evil-smelling sweat, and cold extremities were present, was due not to chronic intestinal stasis but to chronic diarrhoea, the result of some intestinal infection, contracted by a lady whilst big game hunting in West Africa.

It is not at all uncommon to be told by a patient, who is in the habit of taking large quantities of aperients for constipation, that the lassitude, headache, and abdominal discomfort from which he suffers are better if he forgets to take his aperient and his bowels are not opened. His symptoms appear to be due to the absorption of poisons from the abnormally fluid faeces in his colon, and are therefore a result of the diarrhoea produced by his aperient, and not a result of his constipation. It is important before examining such cases with the *x* rays that the patient should not take any aperient for some days. When this has been done, I have often been able to demonstrate the complete absence of intestinal stasis, although many of the patients were contemplating some operation for relief of their supposed constipation. The bismuth reached the rectum in the normal time, but the patients had become so convinced that their bowels would not act without help that they made no attempt to open them, as they did not feel the violent desire which resulted from the use of their aperients. When it was explained to them what the *x* rays had shown, and also that a finger inserted into the rectum proved that it was full of faeces only waiting to be expelled, they were persuaded to try to open their bowels, and succeeded in doing so. A gentleman, 38 years old, whom I saw in April, 1910, was convinced in this way, and he has had his bowels opened regularly ever since without treatment of any sort, although up to that time he was taking an enormous quantity of aperients, and was sent to see me for an opinion as to whether the colectomy which had been advised ought to be performed.

It is well known that the frequency of the stools gives no certain evidence as to the existence of intestinal stasis. Thus a condition analogous to retention of urine with overflow may occur in the bowel, the patient being exceedingly constipated, but passing numerous small stools every day. On the other hand, in the condition aptly described as "greedy colon" by Sir James Goodhart, the patient may only open his bowels once every three or four days, and yet be perfectly healthy; in such cases I have found with the *x* rays that the passage through the bowels is generally normal in rate, but the quantity of faeces formed is so small that several days may be required for sufficient to collect in the pelvic colon to give rise on entering the rectum to the call to defaecation.

By giving some charcoal with breakfast one morning, and watching for its appearance in the stools, the total time taken in its passage through the alimentary canal can be ascertained; but this method gives no indication as to the part of the bowel in which stasis occurs.

We are therefore driven to the conclusion that the only reliable means of determining whether a patient is suffering from chronic intestinal stasis and of ascertaining

exactly what parts of the alimentary canal are at fault is a series of examinations with the *x* rays. It is, however, first necessary to determine whether large doses of bismuth salts interfere with the normal activity of the bowel, for it has rightly been pointed out that they are among the best drugs for combating certain forms of diarrhoea. In order to test this point Mr. F. Cook and Mr. E. G. Schlesinger at my suggestion took charcoal on a number of occasions at different hours in the day, their bowels being regularly opened in the morning at about 9 a.m. By this means they found the shortest time required for the charcoal to appear in their faeces. On repeating their investigations with 2 oz. of bismuth oxychloride added to the charcoal they found that the time was unaltered. I have since been able to confirm these experiments in a number of constipated individuals. I believe that bismuth salts only influence those cases of diarrhoea in which excess of sulphuretted hydrogen has developed as a result of abnormal putrefaction; this gas is a powerful stimulant to the intestinal movements, but is rendered inert by combining with bismuth. In common with many others, I now use barium sulphate instead of bismuth oxychloride, as it does not combine with sulphuretted hydrogen, and under no conditions affects the motility of the stomach or intestines; it is equally non-poisonous, the shadow it throws is as dense as that of bismuth salts, and its cost is only one-twentieth.

In some unpublished investigations Dr. Rippmann and I found that the weight of the bismuth or barium mixed with the food produces a very slight degree of distortion of the stomach, which is greatly increased in cases of atonic dilatation; it also tends to drag the caecum and the end of the ileum downwards. It is therefore clear that the smaller the dose used the more accurate will be the results obtained by means of the *x* rays. Except in very fat individuals, 2 oz. of bismuth oxychloride or barium sulphate are ample for all practical purposes; the use of 6 oz. trebles the error.

Valuable as the *x* rays are in the investigation of the motor functions of the alimentary canal, they have led to many erroneous diagnoses, owing to a want of appreciation as to what constitutes the normal. In a recent discussion at another society cases were related by various speakers, in which a diagnosis of intestinal stasis was made, although the details given of the time at which different parts of the bowel were reached fell well within the normal limits. Thus one speaker concluded that the presence of bismuth between the hepatic flexure and the iliac colon thirteen hours after the meal in one of his cases suggested some mechanical difficulty in the left iliac fossa. It would be rare to find less evidence of "stasis" in a normal individual.

The first examination of a case of intestinal stasis by means of the *x* rays was made by me in 1907 after my fellow-workers and I had examined a considerable number of normal individuals. The figures which we published of the average time taken for bismuth to reach different parts of the bowel in normal individuals have since been regarded as the standard, and any case in which delay, when compared with this standard, has been observed, has too often been diagnosed as an example of intestinal stasis. The error of this is obvious when it is remembered that our figures represented the average of considerably divergent times, and more extended experience has convinced me that the normal limits are even wider than we originally supposed. Thus in fifty-eight normal individuals examined by Alan Newton seven hours after a bismuth meal, the furthest point reached by the bismuth was the caecum in four, the ascending colon or hepatic flexure in twelve, the transverse colon or splenic flexure in thirty-one, the descending or pelvic colon in eleven. Though the average furthest point is in the transverse colon, corresponding to what we described in 1907, it would clearly be incorrect to say that stasis was present in an individual in whom the bismuth had not reached beyond the hepatic flexure after seven hours.

Gastric Stasis.

A meal consisting of half a pint of porridge or bread and milk mixed with two ounces of bismuth oxychloride or barium sulphate is completely evacuated by the stomach in about four hours. If, therefore, any bismuth is still seen in the stomach six hours later, gastric stasis is certainly present. It is obvious that this rule only holds good if nothing is eaten or drunk between the bismuth meal and the last examination. Supposing, for example, the bismuth meal is eaten at 10 a.m. and lunch is taken at 1 p.m., the latter becomes thoroughly mixed with the small quantity of bismuth and food which is normally still present in the stomach. Instead of all the bismuth being evacuated by 2 p.m., some will still be present two or three hours later, when it will again be mixed with the food if tea is now taken. At 6 p.m., therefore, eight hours after the bismuth meal, a small shadow may still be seen, as I have found by actual experience in normal individuals, and if dinner is taken between 7 p.m. and 8 p.m. the last trace of bismuth will not be evacuated until midnight or later. I have repeatedly seen a diagnosis of gastric stasis made because a shadow was still present in the stomach six or more hours after a bismuth meal, although this was perfectly normal, as more food had been given in the interval, and a subsequent examination, in which this source of error was avoided, showed that the stomach emptied itself in the normal time.

The nearer a bismuth meal approaches a normal meal in taste and consistence, the more reliable will be the results obtained. For this reason the bismuth or barium salt should be mixed with bread and milk or well-made sweetened porridge, instead of with water and lactose, as the latter makes a most unpleasant mess, the nastiness of which inhibits the normal gastric movements and secretion. An example of this has been recorded by Dr. Ironside Bruce. More recently I found some bismuth still present in the stomach twelve hours after a lady had taken a mixture of this sort, which had made her feel extremely nauseated. The next day she took an equal quantity of the same salt of bismuth in porridge, which she liked, and every trace of it disappeared from the stomach within six hours.

When the precautions described are taken, it is found that no connexion of any sort exists between gastric and intestinal stasis. In organic pyloric stenosis, which always gives rise to gastric stasis, the chyme, which passes through the pylorus abnormally slowly, often traverses the intestines at the normal rate. The constipation, which is almost invariably present, is due solely to the small quantity of faeces formed owing to the deficiency of chyme reaching the intestine; too little faeces therefore reach the pelvic colon to give rise on entering the rectum to a daily call to defaecation. This view is confirmed by the fact that gastro-enterostomy at once relieves the constipation by allowing an adequate quantity of faeces to form.

Conclusion.—When precautions are taken to prevent errors in diagnosis, it is found that intestinal stasis never leads to gastric stasis.

The Duodenum in Intestinal Stasis.

Under normal conditions the bulbus duodeni or proximal portion of the first part of the duodenum is more or less constantly visible during gastric digestion. Peristalsis only occurs in it to a very limited extent, the chyme which has come to it from the stomach remaining in it sufficiently long for neutralization to occur by its admixture with the alkaline duodenal secretion, pancreatic juice, and bile. The pyloric sphincter then relaxes again, and the entry of a further quantity of chyme causes that already present to overflow into the distal portion of the first part of the duodenum, from which it is immediately conveyed by a rapid peristaltic wave. As the bismuth-containing chyme is greatly diluted in the bulbus duodeni by the digestive secretions, its shadow is less dense and defined as it passes through the rest of the duodenum, and its bulk is never sufficient to unfold and fill completely any part of it after the bulbus duodeni has been left. It generally stops for a short time somewhere in the distal part of the duodenum before being conveyed with equal rapidity into the jejunum. As it passes along the small intestine by frequent very rapid peristaltic waves, which carry it a few inches at a time, it becomes more and more difficult to recognize with the *x* rays, owing to the subdivision it undergoes at each stopping place as a result of segmentation, and to its admixture with further quantities of intestinal juice; finally it is completely lost to sight

until the chyme begins to collect in the last few inches of the ileum.

When the stomach empties itself with unusual rapidity, as it does in cases of duodenal ulcer and less frequently in certain other conditions, the duodenum at any given moment contains more chyme and bismuth than under normal circumstances; consequently, the whole duodenum, which in healthy individuals is never more than half full, even when the stomach is emptying itself most rapidly, becomes filled by the bismuth-containing chyme in its passage to the jejunum. Careful observation shows that there is no stasis; the bismuth passes rapidly into the jejunum, being replaced in the duodenum by a further quantity from the stomach. Owing to an error in the interpretation of the *x*-ray appearance, it has been thought that the duodenum was dilated in such cases, whereas it really is of normal size, but contains more chyme than usual, and therefore gives a denser and wider show. The so-called writhing of the duodenum, which has been described as occurring in cases of supposed intestinal stasis as a result of a duodenal kink, is nothing else than the normal peristalsis and segmentation rendered more clearly visible than usual by the great quantity of bismuth-containing chyme present. This "writhing" of the duodenum was recently demonstrated to me in the case of a woman suffering from gastric symptoms; a few days later Mr. Steward operated and found an organic hour-glass constriction of the stomach, but the duodenum was completely free from obstruction and dilatation. As the evacuation of the stomach is always accelerated by lying down on the right side, the duodenum is filled more rapidly, and may therefore be seen more readily, if the patient assumes this position before turning on his back for the examination. The skiagrams which have been published as examples of the dilated duodenum, which is stated to give rise to duodenal ulcer and to be due to obstruction by a duodenal kink, represent, I believe, a duodenum of normal size, which is exceptionally full as a result of posture, as we are told that before the skiagram is taken "it is necessary for the patient to lie on his right side for two or three minutes," whilst in cases of duodenal ulcer the rapid evacuation of the stomach is an additional factor. Moreover, the skiagram is taken in the horizontal position, although those who believe in the frequent occurrence of duodenal kinks state that they are only produced in the erect position and disappear on lying down. In over fifty cases of uncomplicated duodenal ulcer I have never yet seen a dilated duodenum or a duodenal kink, and it is a characteristic feature of the condition that the stomach is hypertonic and empties itself with unusual rapidity, the bismuth passing through the small intestine and reaching the colon with remarkable speed. These observations are in complete agreement with those of Dr. Barclay of Manchester, Mr. Rowden, who has investigated all of Sir Berkeley Moynihan's more recent cases at Leeds, Dr. Kreuzfuchs of Vienna, and many others, none of whom have ever seen the kink or dilatation, the radiographic evidence for which depends upon the unconfirmed investigations of a single observer.

The constipation, which is generally present in cases of duodenal ulcer, is not the cause of the ulceration, as in many cases it only develops after the symptoms of ulcer have appeared, and it almost invariably disappears as soon as the ulcer heals, whether as a result of medical treatment or of the performance of a gastro-enterostomy.

Conclusion.—Intestinal stasis does not lead to duodenal kinking, dilatation, or ulceration, and duodenal ulcers are associated with an unusually rapid passage of chyme out of the stomach and through the whole of the small intestine.

Iliac Kinks, Iliac Stasis, and the Ileo-caecal Sphincter.

In 1903 Keith demonstrated the existence of a strong ileo-caecal sphincter in man. It was thought by many that its function was to prevent the regurgitation of faeces from the caecum into the ileum when anti-peristaltic waves passed down the ascending colon. *X*-ray investigations have, however, shown that anti-peristalsis does not occur in man under normal conditions; moreover, the ileo-caecal sphincter does not prevent regurgitation into the ileum, as, in common with other observers, I have seen a bismuth suspension pass into the ileum when run into the colon through the rectum at as low a pressure as one foot of water. There can be no doubt that the function of the sphincter is, as Keith originally suggested, to prevent the contents of the ileum passing too rapidly into the caecum. Some recent observations made with Mr. Alan Newton of Melbourne have confirmed and amplified my earlier investigations on this subject. We have found that the bismuth-containing chyme reaches the end of the ileum an hour, or even longer, before any appreciable quantity passes into the caecum, and that the ileum is often still full four, five, or even more hours after the last traces of bismuth have left the stomach. Consequently an accumulation of chyme occurs in the last few inches of the ileum, where it remains and undergoes digestion actually for a longer period than in the stomach. During the whole of this period active segmentation, but very little peristalsis, can be seen. It is clear, therefore, that the function of the ileo-caecal sphincter is to prevent the passage of the contents of the ileum into the caecum until sufficient time has elapsed for digestion and absorption of foodstuffs to be complete, as the chyme which reaches the caecum contains only traces of nutrient material in solution. Iliac stasis is thus a normal physiological condition of the utmost importance for adequate digestion.

The ileo-caecal sphincter begins to relax at infrequent intervals some time after the arrival of chyme in the end of the ileum, but only when another meal is taken does peristalsis occur at all actively in the extreme end of the ileum in addition to segmentation; the sphincter apparently relaxes as each peristaltic wave reaches it, a great part of the contents of the end of the ileum being rapidly squirted into the caecum. In spite of this, if ordinary meals are taken after a bismuth meal, so that some bismuth remains in the stomach (in the manner already described) until the evening, the shadow at the end of the ileum may be visible in normal individuals until late at night.

The normal iliac stasis is increased in all conditions leading to spasm or to the inhibition of the normal relaxation of the ileo-caecal sphincter. In acute appendicitis, for example, the sounds which normally indicate the squirting of the contents of the ileum into the gas-containing caecum cease completely, owing probably to spasm of the sphincter, which Elliott has shown occurs in animals when the splanchnic nerve is stimulated or the neighbouring peritoneum is irritated. In chronic appendicitis similar but less marked delay often occurs. One of the most marked cases of iliac stasis I have ever seen was in such a case. Six hours after the bismuth meal the stomach was empty, but no bismuth was present in the caecum, all of it having collected in the end of the ileum, though in the average normal individual the shadow by this time would have reached the hepatic flexure. The last few inches of the ileum could be clearly defined, as they were distended with chyme. Palpation under the screen showed that there were no adhesions, the whole of the ileum being freely movable. Twenty-four hours later some bismuth was still present in the last inch and a half of the ileum and a little in the caecum and ascending colon, all the rest having passed to the rectum, from which some bismuth-containing faeces had just been evacuated. It was clear, therefore, that the only stasis in this patient's alimentary canal was in the end of the ileum. Mr. Rowlands operated and removed a diseased appendix, but found that the ileum was perfectly normal and was free from adhesions. The ileo-caecal junction was not abnormally narrow, so that it was clear that the stasis could have been due to nothing else than inhibition of relaxation or spasm of the ileo-caecal sphincter.

The end of the ileum, as it rises from the pelvis to join the caecum, bends in various directions; as the shadow on the screen is in one plane only, it is natural that it often appears as if it formed one or more acute angles or kinks; it is obvious, therefore, that no conclusion of any sort can be made from skiagrams alone as to the presence or absence of kinks. By palpating the abdomen during the examination it is easy to demonstrate that most of these "kinks" are only apparent. Sometimes the ileum appears

to be fixed where it crosses the pelvic brim, but by manipulation the whole loop can be raised out of the pelvis, and the apparent adhesions and kink disappear. Recently I saw what appeared to be a typical iliac kink, the ileum being fixed where it passed over the brim of the pelvis; no amount of manipulation had any effect upon it, but on inflating the bowel in carrying out Bastedo's test for appendicitis the distended pelvic colon lifted the last part of the ileum completely out of the pelvis, and palpation now showed that there were no adhesions and no kinks. I suggest, therefore, that before a diagnosis of an iliac kink be made with the *x* rays the colon should be inflated, if palpation has failed to separate the apparent adhesion.

Although there can, of course, be no doubt that abnormal bands may occur in connexion with the terminal portion of the ileum, even though their existence cannot be demonstrated with the *x* rays, I do not feel at all convinced that they are of any importance, except in quite exceptional cases, in which clear evidence of antecedent attacks of appendicitis can almost invariably be obtained. The obstruction offered by a genuine iliac kink is hardly ever as great as that normally offered by the ileo-caecal sphincter three inches farther on. Thus in the skiagrams published to illustrate the iliac kink the lumen is not even always narrowed. When it is narrowed, there is nothing to show that the narrowing does not represent a division produced by the segmentation, which normally occurs with great activity in the end of the ileum. Nothing short of almost complete stenosis could lead to stasis of any importance, as the contents of the ileum are always so fluid that they can pass through a very narrow passage without difficulty. A true iliac kink, if it ever really leads to iliac stasis, probably does not do so directly, but indirectly by inhibiting the relaxation of the ileo-caecal sphincter, just as gastric adhesions may upset the pyloric mechanism.

It has been suggested that iliac adhesions ought to be surgically treated at the same time as an operation is performed for a duodenal ulcer, for gall stones, and for appendicitis. But in my experience the removal of the gall stones and drainage of the gall bladder almost invariably leads to such complete and permanent relief of symptoms that any further operation done at the same time could not improve the results. In the same way gastro-enterostomy completely cures a duodenal ulcer in a considerable proportion of cases, and if the appendix is at the same time removed the chances of recurrence are exceedingly small. I can hardly imagine that the results would be any better if iliac kinks were also dealt with, and there can be no doubt that the division of bands and membranes in such cases may lead to peritonitis, as Mr. Lane pointed out in his opening address, for I have myself performed the *post-mortem* examination on a patient with duodenal ulcer, in whom death had resulted from post-operative infection in the right iliac fossa, when adhesions in this neighbourhood had been divided in addition to performing gastro-enterostomy. Again, the removal of the appendix in acute appendicitis, if it is done sufficiently early, is rarely followed by any symptoms which could be ascribed to iliac kinks. It is true that the removal of the appendix in the later stages of acute appendicitis and in chronic appendicitis is not infrequently followed by pain in the right iliac fossa and sometimes by other abdominal symptoms; but I have also seen this occur when an iliac kink had been simultaneously dealt with.

Conclusion.—Iliac stasis is a normal phenomenon and results from the action of the ileo-caecal sphincter. Iliac kinks are comparatively rare, and do not directly increase the normal iliac stasis. The normal iliac stasis may be increased by spasm or absence of relaxation of the ileo-caecal sphincter, as a result of disease in the neighbourhood of the caecum, including perhaps iliac kinks.

Kinks at the Hepatic and Splenic Flexures, Ptosis of the Colon, and Colonic Stasis.

In normal individuals examined with the *x* rays the hepatic and splenic flexures almost invariably appear to be acutely kinked. This, again, is the result of the shadow being cast in a single plane, as the limbs of the flexures belonging to the transverse colon are in front of those of the ascending and descending colon respectively, and therefore the flexures appear to be acute, although they form a wide angle when looked at from the side. It is almost always possible to determine when adhesions are present between the limbs of the hepatic and splenic flexures by seeing whether they can be separated by palpation during the *x*-ray examination. In my experience it is very uncommon to find that they cannot be separated sufficiently to make it obvious that no great mechanical hindrance to the passage of the faeces can be present.

A pelvic caecum and a dropped transverse colon are often referred to as if they were invariably associated with constipation. I believe, however, that in a large majority of cases they are quite independent conditions. I have certainly seen a pelvic caecum just as frequently in strong healthy individuals with perfect digestion and no constipation as in constipated patients. Moreover, I have never been able to convince myself, when a pelvic caecum was associated with constipation, that there was any causal relationship between the two conditions, as in the majority of cases dyschezia without delay in the caecum or in any other part of the colon was present. Ptosis of the transverse colon never leads to kinking at the hepatic flexure, which invariably drops with it, but a very movable right kidney may produce obstruction in such cases. A definite sharp kink is occasionally produced at the splenic flexure, as the phreno-colic ligament is stronger than any other of the intestinal attachments. In one case, to which I shall again refer, the kink was so marked that a short-circuiting operation was required, and the transverse colon, which was situated low down in the true pelvis, was anastomosed with the pelvic colon, with which it was already in contact. When constipation is associated with visceroptosis, the former is generally due to dyschezia, which results from inefficient defaecation owing to weakness of the abdominal and pelvic muscles, this weakness being also the cause of the visceroptosis.

Most cases of constipation are more or less cumulative, the bowels never being completely evacuated, so that more and more faeces are retained. In dyschezia, for example, the rectum is never emptied, and an accumulation of hard faeces forms successively in the pelvic colon, descending colon, and even the transverse colon. If, therefore, a bismuth meal is taken without first thoroughly evacuating the bowels, the bismuth travels with more or less ease as far as the beginning of the faecal accumulation, beyond which it passes with extreme slowness, corresponding with the rate of excretion of the most distal part. If, however, the colon is first thoroughly evacuated by means of enemata, it is found in such cases that the bismuth often reaches the rectum in the normal time but owing to difficulty in defaecation it is retained there. It is only possible to distinguish such cases of dyschezia from true colonic constipation, in which delay occurs in the colon itself, by emptying the bowels completely by enemata before the examination begins. Numerous mistakes in diagnosis have resulted from neglect of this precaution.

My investigations, both with the *x* rays and by other means, have led me to realize that in a large majority of instances only part of the colon is affected in constipation. Thus, in nearly half of the severe cases I have seen in consultation the rectum, or less commonly the pelvic colon, was affected alone, the condition which I have called dyschezia being present; this can generally be treated with success by re-educating the patient to defaecate by regular habits, exercises for the abdominal and pelvic muscles, and graduated enemata. In other cases the caecum and ascending colon are alone affected; as soon as the bismuth gets into the transverse colon its passage to the rectum is normal in rate. Such cases can generally be relieved by diet and drugs, with the aid of massage applied regularly for a prolonged period to the affected part. I have not myself seen a case in which I thought an operation was indicated, but if all medical treatment failed, it seems to me that an anastomosis between the ileum and the transverse colon, with or without the removal of the caecum and ascending colon, as successfully performed by Wilms and de Quervain, would be more rational and less dangerous treatment than ileo-sigmoidostomy combined with complete colectomy. In another group of cases the passage as far as the splenic flexure is normal in rate, but considerable difficulty is experienced in getting beyond this point. This is sometimes due, as I have already

pointed out, to severe ptosis of the transverse colon, the splenic flexure remaining fixed, and sometimes to unexplained muscular weakness of the distal part of the transverse colon. If such cases are examined by means of a barium enema it is generally found that the fluid run in from the rectum passes without difficulty into the transverse colon; moderately large enemata without the aid of drugs or other treatment, with the exception of an abdominal support if ptosis is present, are then often successful. In two of my cases, however, all medical treatment failed to give relief, and Mr. F. J. Steward effected an anastomosis between the lowest part of the transverse colon and the pelvic colon in one instance, and between the two limbs of the splenic flexure in the other, with satisfactory results.

The comparatively rare cases in which the whole of the bowel is involved are generally amenable to treatment by diet, massage, and drugs. I have up to now only seen a single case, out of the very large number I have examined with the *x* rays, in which the whole of the colon was involved and in which, in spite of every form of medical treatment I could devise, the patient became steadily more and more poisoned and suffered from more and more pain. Mr. Arbuthnot Lane was good enough to operate on this case for me in December, 1911, and the relief, which was almost instantaneous, has proved permanent and complete. I am therefore convinced that when the whole of the colon is involved, and when thorough and prolonged medical treatment has proved completely ineffective, the operation of ileo-sigmoidostomy is the only rational treatment.

Conclusion.—Ptosis of the intestines does not lead to stasis, except in rare instances at the splenic flexure, a pelvic caecum and a pelvic transverse colon being compatible with perfect health and normal intestinal action. In most cases of constipation a single part of the bowel, such as the rectum, pelvic colon, ascending colon, or splenic flexure, is alone involved, and treatment should therefore be directed to the affected part only. In those cases in which the whole of the colon is involved medical treatment almost invariably succeeds, but when it does not, ileo-sigmoidostomy, with or without colectomy, is indicated.

THE BACTERIOLOGICAL EVIDENCE OF INTESTINAL INTOXICATION.

BY

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My interest in the question of alimentary toxaemia is naturally confined to the bacteriological and biochemical evidence which has been advanced by the school of Metchnikoff in support of their master's thesis. That thesis, as has frequently been explained in previous contributions to this discussion, asserts that the poisons elaborated by the micro-organisms of the intestinal tract, and particularly those harboured by the large intestine, are the most potent factors in the production of a long array of symptom-complexes loosely grouped under the term "autointoxication," and further, that these same poisons are the essential causes of the sclerotic changes in the organs which accompany old age. The thesis, as you can understand, is, therefore, a perfectly straightforward one, and one which ought to admit of both observational and experimental bacteriological proof. In the absence of proof capable of satisfying the bacteriological critic the thesis must remain little more than a fascinating hypothesis. It will be my purpose, therefore, to discuss as briefly and succinctly as the time at my disposal permits the main bacteriological evidence which Metchnikoff and his pupils have brought forward during the past four years in support of the theory of intestinal intoxication. This evidence has been sought for in the following types of research:

1. An investigation of the flora of the large intestine or of the faeces, with a view to the classification and identification of the various bacterial groups and their biochemical properties.

2. Experiments on the toxic action of filtrates of special groups of these micro-organisms in animals.

3. Analogous experiments with substances of definite chemical composition, especially indol.

4. Alteration in the intestinal flora as the result of food changes, constipation, and operations undertaken for the removal of the large intestine.

In connexion with the first of these lines of research the main work has been done by Metchnikoff himself and his pupils, especially Distaso, who have built on the earlier work of Tissier, and I would here point out that French authors are too prone to the assertion that our knowledge of the intestinal flora has been in the main the outcome of French work. Such, of course, is by no means the case. In fact, the chief contributions to our knowledge of the coliform group have come from workers in this country and in America. It is, however, to the anaërobic flora particularly that Metchnikoff and his pupils have directed their attention, as it is these proteolytic anaërobes which they specially incriminate as playing the chief rôle in what they call "intestinal putrefaction." It would be out of place to enter into a description of these various anaërobes, as I am convinced that the question of the classification and identification of these groups is far from settled, and there are probably far more names than bacteria to correspond.

It is doubtful if much that is new on this subject has emerged from recent French work. The chief putrefactive organisms whose cultural and biochemical properties have been studied in connexion with intestinal putrefaction have been *B. perfringens*, *B. sporogenes*, and *B. putrificus*, but it cannot be said that we have yet accurate methods of differentiating anaërobes. One must also mention the acidophile or acetogenic organisms which by the French observers are regarded as highly beneficent organisms by virtue of the inhibitory effect exercised by their acid products on the growth and activity of the putrefactive types.

Of these acetogenic organisms which have the property of producing acid from lactose and of being able to grow in acid media the most important perhaps is the *B. bifidus* of Tissier. This author found that this organism is the chief representative of the flora of the breast-fed child, a statement which more recent work has confirmed. It may be noted that *B. bifidus* is a strict anaërobe, and is Gram-positive.

A very similar organism to which attention has been paid is the *B. acidophilus* of Môro. As the child passes on to more varied food there is a gradual change in the flora from the purely fermentative type represented by the acid formers above mentioned to a combined flora of the fermentative and putrefactive type, using the term "putrefactive" in the sense of ability to break down nitrogenous constituents to the stage of peptones and proteoses and mono and diamino acids. Further katabolism of these cleavage products is effected mainly by the representatives of the *coli* group, many of which have the power of producing indol from tryptophane, and some of producing phenol from tyrosin.

Now it is seen that in the adult normal human flora the Gram-positive acetogenic organisms, represented by *B. bifidus*, are rare, and never predominate as in the young child. The predominant group is that of the *B. coli*, and in addition there are the representatives of the putrefactive anaërobic group (*B. putrificus*, *B. perfringens*, *B. sporogenes*, etc.).

Indol is formed chiefly by coliforms, and only to a small extent by these putrefactive anaërobes. It is, therefore, all the more surprising that Metchnikoff and his school should have drawn so much attention to the anaërobes as the chief factors in intestinal putrefaction, while at the same time their energies should have been devoted to the investigation of the toxic action of indol, a product chiefly of coliform activity. How far the indican in the urine is an evidence or a measure of intestinal putrefaction by micro-organisms is not yet completely settled, but admitting for the sake of argument that it does come from the action of micro-organisms in the intestine, it is not at all clear why it should be regarded by Metchnikoff and his school as the chief toxic agent produced by their action. Indol, of course is a substance of definite chemical composition, while the known bacterial toxins are of unknown chemical composition. How far,

then, the Metchnikoff school is justified in taking a simple substance like indol as the toxic product *par excellence* of the action of putrefactive intestinal microbes is extremely doubtful. Recently the opinion has been revived by Emmerich that in cholera the symptoms of intoxication are not due to specific vibrio toxins but simply to the nitrites, which, as you know, the *V. cholerae* is capable of forming in the test tube.

Little support has been given to this view in the case of cholera, and it would therefore seem all the more gratuitous to regard indol as the main toxic product of putrefactive organisms the pathogenic action of which has been only very insufficiently studied.

Let us see, therefore, what has been the main result of the experimental work performed with these putrefactive anaërobes and with their presumed chief toxic product indol. In one of his earliest papers Metchnikoff tested the toxic action of filtrates of some of these anaërobes. Filtrates were tested intravenously on rabbits in doses of 7 to 8 c.cm. per kilo of body weight. These are very large doses. For an ordinary full-grown rabbit this would mean at least 20 to 25 c.cm., and it is not surprising that in some cases a fatal result ensued. Great variation, however, was apparent in the toxic power of these filtrates (*B. perfringens*). Nevertheless the result of these experiments led Metchnikoff to state that in the putrefactive organisms of the digestive tube we have a source of autointoxication. Further experiments on this line were performed by his pupil Korentschewsky, who tested filtrates of anaërobic organisms isolated from rabbits' faeces. Occasionally quite potent filtrates killing in 1.3 c.cm. per kilo were obtained, but in other cases doses of 20 c.cm. per kilo did no harm. The strongest filtrate was prepared from *B. perfringens*.

Experiments were also performed on rabbits by intrarectal injection of filtrates, and there was some very slight evidence that antibodies to these organisms appeared in the blood serum.

In the case of dogs fed daily with broth cultures of *B. perfringens* (in very large doses, 200 to 500 c.cm.), progressive loss of weight occurred with slight anaemia, and when the animals were killed some evidence of sclerotic changes in the kidneys were found. It is surprising that nothing worse happened after such heroic dosing!

It must not be supposed, however, that the putrefactive organisms are the only defaulters. The flora of the large intestine is, according to Metchnikoff, wholly bad, and therefore we have other series of experiments with preparations of staphylococci, *B. coli*, etc.

According to Manouélian, atheromatous plaques appeared in the aorta of a large proportion of rabbits inoculated repeatedly with staphylococci (in 73 out of 86), and also in monkeys. These plaques occurred at the level of the arch of the aorta. It must be noted, however, that Weinberg found spontaneous atheroma in 4 to 19 per cent. of rabbits. More recently Bertrand and Berthelot have isolated from the faeces of patients suffering from chronic autointoxication an organism which, when grown on a special medium containing histidine, yields a highly toxic product apparently identical with β-imid-azolethylamine, a base previously obtained by Ackermann in the putrefaction of histidine, and also by Barger and Dale in ergot. The organism which yielded this toxic product belonged to the coliform group, and, according to the authors, was closely related biochemically to the *B. lactis aerogenes*. The authors make the statement that this particular organism was never found in the faeces of normal healthy people. This is a very important statement, and confirmation must be awaited before it can be accepted.

I turn now to the animal experiments performed with definite chemical substances which are understood to arise from the action of micro-organisms in the intestinal tract. In these experiments by Metchnikoff, Dratschinski, and others, potassium phenylsulphate and indol have been the chief substances whose toxic action on animals has been investigated.

With potassium phenylsulphate atheromatous changes in the aorta of rabbits, guinea-pigs, and monkeys were produced, and small cell infiltrates in the liver and kidney. Rabbits received by the mouth 0.04 gram of paracresol during a period of one to four months, and 61 per cent. of the rabbits showed atheromatous plaques. Dratschinski gave similar doses of indol daily to guinea-pigs by the mouth, and obtained evidence of atheromatous degeneration of the wall of the aorta with chronic interstitial processes in the organs, such as the liver, kidney, and suprarenal capsules. These foci in the wall of the aorta invariably contained calcaréous deposits, and the question to be decided was whether these foci met with in the animals intoxicated with indol were merely further stages in the development of the cartilaginous foci met with in similar situations in normal guinea-pigs, especially those of advanced age. Such foci were met with in 67.5 per cent. of normal guinea-pigs weighing 250 grams and over. The author was of opinion that hyaline and calcareous foci encountered in the intoxicated animals were distinct from the cartilaginous foci found in normal animals, and concluded that intoxication with indol was the exciting cause. It does not appear to me, however, at all proven that the indol, if it affected anything at all, did any more than hasten the calcareous transformation of these normal cartilaginous foci, and the question of the influence of indol in this connexion must still be considered as undecided.

I now come finally to discuss the changes which have been stated to occur in the composition of the intestinal flora in cases of intestinal stasis and in cases which have suffered resection of the large intestine. This question has recently been attacked by Distaso who had the advantage of obtaining material from Mr. Lane's cases.

Distaso roughly classifies the organisms of the intestinal tract according as they do or do not produce indol. In the normal adult man the faeces, as is well known, show a preponderance of indologenic organisms of the coliform group. In constipation, according to Distaso, there are practically no Gram-negative organisms, but there is a great abundance of spores, the indol-formers being now of the sporulating type. There is also an absolute diminution in the quantity of bacilli present. The conclusion drawn by Distaso that the flora of constipation is an index of intoxication is entirely unsupported by the evidence he adduces. In cases operated upon for removal of the large intestine it was observed that the flora showed not so much a qualitative change as a quantitative change with a consequent alteration in the functional activity of the organisms concerned. Before operation the flora was one typical of constipation, while after operation the indologenic organisms had largely given place to the acetogenic (that is, *B. bifidus* and *B. acetogenes*) which are regarded as highly beneficent. The effect of this change, according to the author, is that the acid produced by the latter organisms inhibits the activity of, or actually destroys, any putrefactive organisms present. The evidence on which this statement is based was the fact that, when the faeces were inoculated on a potato medium, marked acid formation took place, while growth on broth containing boiled white of egg only rarely was followed by proteolysis indicating an action on the part of the putrefactive organisms. It is very questionable how far it is legitimate to assume that the function of a flora in the body can be determined by an *in vitro* experiment of this rough order. To prove a change in flora of this character would require far more extensive bacteriological and biochemical research than has so far been devoted to the subject, and it is indeed remarkable that the author should make the astounding statement "that after this study the theory of chronic intoxication by the work of intestinal organisms cannot any longer be in doubt." As a matter of fact, it is not clear from the paper how often the faeces were examined in these cases, and whether samples were taken at operation from the bowel above the resection.

If, as stated, only two examinations of the faeces at a year's interval were made, the data so obtained would be of little value. Such cases would require to be examined repeatedly before and after operation, and under all conditions of diet.

Distaso further asserts that the intestinal flora of the normal adult is noxious, and yet he asks the reader to rejoice with him over the microscopical appearance of the faecal flora of one of these operated cases. This flora, of which a drawing is appended, is characterized as "*une des plus belles*," but certainly the flora of the constipated person—a drawing of which is placed alongside—seems far

the more attractive. With regard to the work done by the Metchnikoff school on the influence of food on the composition of the faecal flora, I would merely refer to certain experiments of Bertrand, who found that rabbits fed on potatoes always gave a marked indican reaction in the urine, while those fed on carrots gave no such reaction. When a carrot-fed rabbit was placed on potato diet indican appeared. The intestinal flora of the two groups did not differ qualitatively, but the potato-fed rabbits had more *B. coli* in the faeces. No quantitative data on this point are supplied. Bertrand's view was that in the potato-fed rabbit there was much less acid production from the fermentation of sugar than in the carrot-fed rabbit, and consequently there was nothing to inhibit the formation of indol by the coliforms present. Also it is stated that the flora of the potato-fed rabbit was very poor in amylolytic species, but data on this point are wanting. It cannot be said that work of this kind advances the subject far. One is tempted to ask why chemical examinations of the intestinal contents were not made at various levels, and accurate records kept of the organisms met with at these levels. In all the recent work on autointoxication and on sour milk therapy, it has to be remembered that the inhibition of intestinal putrefaction by milk and milk constituents, especially milk sugar, was known years before Metchnikoff popularized the administration of milk soured by lactic acid bacilli (see an excellent survey of this subject by Kendall, 1912, *Journal of Medical Research*, vol. xxv, p. 117), and, as pointed out by this author, the effect of such treatment may be due, not to acid produced by the bacilli supplied, but to that produced by *B. coli* acting on the sugar, which is generally increased in the diet. Protein is thus spared, and consequently protein decomposition products do not appear. A bacteriological basis for the view that the activity of lactic acid bacilli inhibits that of the putrefactive organisms in the intestine is still lacking.

In conclusion, I am of opinion that the investigation of the biochemical action of intestinal organisms yields a very large and promising field for future research, and may throw a flood of light on this question of autointoxication, but it does not seem to me that the results achieved in the types of researches so far published by the Metchnikoff school lend any very marked support to the thesis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

LONG SURVIVAL AFTER REMOVAL OF MAMMARY CARCINOMA.

THIS record may be of interest. A lady had a scirrhus of the breast removed in 1898. A recurrence was more widely removed in December, 1899. She lived to November, 1910, when she died of extension to the lungs, aged 68.

During the greater part of the interval she enjoyed very fair health, was able to travel abroad, to see her daughter married, and grandchildren growing up.

Putney, S.W. JOHN GAY.

AFTER-HISTORY OF A CASE OF MYELOID SARCOMA OF THE FEMUR TREATED BY SCRAPING.

IN the JOURNAL of February 26th, 1898, I reported the case of myeloid sarcoma of the femur operated upon in 1895. Since then the patient has remained in perfect health, and recently writes, "My health is very good; my knee is sometimes painful, but is fairly strong; I cannot bend it. I am able to attend to my work (a wheelwright's), and have walked ten to twelve miles in a day. There is still a slight discharge from the wound, which I dress about once a week." Obviously this is a better result than that obtained by amputation.

Professor Bloodgood of Baltimore, in a paper published in the *Transactions* of the American Surgical Association, 1910, had collected two cases besides this one, which had been similarly treated, and had both done well.

From the discussion at the Surgical Section of the Royal Society of Medicine in November last, at which no example of treating myeloma of the femur by scraping was mentioned, it must be inferred that the method is not practised at the London hospitals. In the hope that surgeons will give it a trial I venture to again draw attention to the case which has been under observation for eighteen years.

FRANK HINDS, M.D.,
Honorary Surgeon, Worthing Hospital.

LARGE FIBROMYOMA OF THE URINARY BLADDER.

THE following case is interesting from the fact that fibromyoma is exceptionally rarely found in the bladder.

Mrs. H., aged 44, was admitted to the Walsall Hospital on February 2nd, complaining of retention of urine, pain over the region of the bladder—both of three months' duration—and of haematuria of one week's duration. The usual points of differential diagnosis were considered, and in order to facilitate the examination she was anaesthetized. On vaginal examination, a large, hard tumour was felt over the anterior vaginal wall. The uterus was freely movable and normal in size. It was decided to explore the bladder, and for this purpose the urethra was dilated until it admitted the forefinger. By this means it was ascertained that the tumour was occupying practically the whole of the bladder and was firmly fixed in the region of the trigone. Subsequently the bladder was opened suprapubically and the growth, which was the size of a closed fist, removed after ligating the pedicle. She made an uninterrupted recovery.

Microscopically the tumour was composed of interlacing bundles of smooth muscle tissue, with a small amount of stroma and well formed blood vessels. There was no evidence of malignancy.

I am indebted to Mr. Caddick for permission to publish this very interesting and extremely rare case.

Walsall. J. D. SPEID SINCLAIR, M.B., Ch.B.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

OXFORD AND READING BRANCH: MAIDENHEAD DIVISION.

CLINICAL MEETING.

AT a well-attended meeting of the Maidenhead Division of the Association held at the Guildhall, Maidenhead, on March 27th, after Dr. G. E. MOORE, who was in the chair, had entertained those present to tea, Mr. ANGUS MACNAB, F.R.C.S., read a paper on *Recent operative procedure in glaucoma*. The inefficiency of iridectomy in the treatment of chronic glaucoma and the study of the pathological material available had combined to lead to the view that the criterion of success in the surgical treatment of this disease must be the establishment of a fistulous track between the anterior chamber and the subconjunctival lymph space. He described briefly and lucidly the methods of Professor Lagrange, Lieutenant-Colonels Herbert and Elliot, I.M.S., and paid a tribute to the skill of these surgeons. The detailed technique of Herbert and Elliot's operations was described, the speaker's preference being for Elliot's method by means of a special trephine. The important point in both these operations was that the aperture should be close up to the corneal margin. Mr. MacNab was heartily thanked for his interesting paper. Dr. J. J. PATERSON, D.P.H., followed with an amusing paper on *Quacks and their methods*. He had a regular Odyssey of adventure to relate in his personal experiences with some well-known quacks; and although some of the narratives might not perhaps be quite appropriate for a lady's boudoir, the success of his crusade in exposing some of these gentry was heartily appreciated. The meeting then adjourned.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Monday, April 14th, 1913.

Sir FRANCIS CHAMPNEYS, President, in the Chair.

Resumed Debate on Alimentary Toxaemia.

MR. J. B. LAWFORD, in reopening this discussion, said the relation of disorders of the alimentary tract to eye diseases was still largely a matter of hypothesis. In recent textbooks on ophthalmology there was an absence of dogmatism on the subject, or no reference at all to it. In Germany and America many papers on this branch of the subject had appeared during the last few years, revealing great difference of opinion. Five years ago de Schweinitz said there was no ocular disease known to be due to intestinal autointoxication. Recently, however, a number of observations had made it probable that alimentary toxaemia was a contributory factor. In any case, it was a good working hypothesis, which would help to explain the clinical manifestations better than any other. That toxaemia resulted from mouth sepsis, especially gingivitis and pyorrhoea alveolaris, could no longer be doubted. The association of the latter condition with chronic irido-cyclitis was well known to all ophthalmic surgeons, and one of the first to recognize this was Mr. William Lang. Yet most of the subjects of pyorrhoea did not have irido-cyclitis, and some patients with irido-cyclitis had sound and clean mouths. Recurrent and relapsing forms of scleritis, episcleritis, and sclero-keratitis, were met with in subjects of pyorrhoea, yet careful treatment of the mouth had often failed to benefit these ocular conditions, and vaccine treatment in most instances had been disappointing. Tonsillar disease had frequently been thought to cause ocular inflammation, and it was permissible to assume that the tonsils might generate a toxin capable of inducing ocular lesions. The same might be said of choroiditis; and the occurrence of infection of the choroid in puerperal septicaemia was well known. The choroidal inflammation which he considered to be freely associated with pyorrhoea was localized exudative choroiditis, though this certainly owned other causes as well. Asthenopia, of varying type, unrelieved by the correction of refractive errors, had been recorded in patients the subject of pyorrhoea, and had been said to disappear on the treatment of the oral disease, but he had not met with such a case. The relationship of ocular lesions to enterogenous toxaemia was a more difficult problem. The diseased conditions of the intestines were invisible and the tests for pathological processes were not yet absolutely reliable; consequently diagnosis had to be largely a matter of exclusion. Until recent years syphilis, rheumatism, gout, and gonococcal infection were the accredited causal agents of many of the inflammatory affections of the eye, but in a good proportion of cases of keratitis, episcleritis, sclero-keratitis, irido-cyclitis, and choroiditis all these causes could be excluded. Here intestinal toxaemia could reasonably be invoked. Maladies accompanied by an abundance of intestinal toxins, such as dysentery, were accompanied by ocular lesions, such as retinal haemorrhages, retinal phlebitis and choroiditis. Inflammatory lesions affecting the uveal tract occupied a foremost place in the category of ocular diseases ascribed to enterogenous toxaemia. In a case reported by Bacquis of relapsing choroiditis associated with stenosis of the intestine, the relapses coincided with the recurrent blockages of the gut. Elschnig considered that in all cases of iritis in which syphilis could be excluded as a cause examination of the intestinal condition should be made. The type of ocular disease was similar to that following oral sepsis. Choroiditis of varying type was met with in patients with marked indicanuria and other intestinal derangements, and in whom other likely causes of choroidal inflammation could be excluded. More than one writer had attributed cataract to intestinal toxaemia; cataract was a frequent sequel of any form of chronic uveitis. In episcleritis and sclero-keratitis, when tubercle as a cause could be excluded, their possible dependence upon toxaemia should be considered. He had seen relapsing sclero-keratitis in patients whose urine contained abundance of *Bacillus coli communis* and in whom there were other signs of toxaemia. The association of recurrent attacks of phlyctenular keratitis with gastro-intestinal disturbance in children was well known. Certainly treatment of the intestinal condition benefited the ocular. Some authorities, such as Uhthoff, doubted a causal connexion between gastro-intestinal auto-intoxication and lesions of optic nerve and retina; but there were cases calculated to modify that doubt. Many years ago Horner considered that the gastric derangement induced by tobacco and alcohol was partly responsible for the optic nerve lesions found in cases of poison by those drugs. Acute retro-ocular optic neuritis might be a result of auto-intoxication, and support was afforded by some recorded cases; also to the idea that the optic neuritis associated with chlorosis was due to intestinal toxaemia. He had not found records of cases of oculo-motor paralysis in which auto-intoxication was a probable cause. Recurrent haemorrhages of the retina and vitreous in young men, described by Eales, had been attributed to oral or intestinal sepsis, and obstinate constipation was nearly always present in these cases. The causal relation of toxaemia to infective processes in eyes on which operations had been performed was a matter of great importance. Ophthalmic surgeons were familiar with unexpected iritis and irido-cyclitis arising several days after an uncomplicated operation, such as for cataract, and it was conceivable that these were examples of toxaemic troubles, and that the altered conditions of life and the diminished tissue change inseparable from operations and confinement to bed might favour the development of toxins, and that they might become active in the part of the uveal tract which had been operated upon. There was much evidence in support of the contention that ocular and toxaemic conditions were often related, and there was encouragement to pursue investigations with the object of removing the present doubt on the subject.

Professor DIXON, F.R.S., said he regarded a toxin as a substance which, when injected into an animal, produced an antibody. Toxins administered by the mouth to healthy men and other animals were not absorbed. When digestion occurred under normal sterile conditions the products of such digestion were non-poisonous, but the case was different under the influence of certain putrefactive processes. Sulphuretted hydrogen might then be produced, which had been said to cause chlorosis. If the amount of ammonia in the portal vein was increased, definite pathological conditions of the liver might be produced, and the continuance of the procedure led to a type of hepatic cirrhosis. The important toxins produced in the alimentary canal of which anything was known were those produced from amino acids, which themselves were non-poisonous, but if acted on by certain micro-organisms occurring in the alimentary canal, they became poisonous by parting with one molecule of carbon dioxide. Tyrosin was non-poisonous, and if taken in even large quantities by the mouth would not only cause no harm, but would act as a food substance. But if tyrosin were grown in broth and inoculated into an animal with human faeces, it lost its molecule of CO_2 and became poisonous. Putrefaction in the alimentary canal was a normal process, and small quantities of these poisonous amines were being continually produced, and the micro-organisms in the intestinal tract probably exerted a beneficent influence; the body depended on these extraneous organisms for the effectiveness of digestion. The speaker then described and illustrated by the epidiascope some of the pressor substances which acted definitely on plain muscle. The chronic effects of toxic substances in the alimentary tract were felt on the kidneys and the arterioles. The kidneys were enlarged and the glomeruli and tubules greatly dilated, the former containing granular débris. The arterioles became degenerated.

Dr. LEDINGHAM then dealt with the bacteriological aspect of the question, in a paper which is published at p. 821. He was followed by Dr. GALLOWAY, whose paper will be found at p. 815.

Dr. MANTLE (Harrogate) said that large numbers of cases of functional disorders of the alimentary canal found their way to Harrogate, and in many of them apparently trivial lesions in the mucous membrane of the

nose and tonsils were the cause of lesions in joints. Too much stress could not be laid on pyorrhoea alveolaris and dental caries as a cause of early alimentary disturbances. There were thousands of constipated persons who had no bad symptoms, probably due to the cells of the mucosa forming such a strong barrier of defence, combined with the antitoxic function of the liver. Sometimes the toxin affected the respiratory mucous membrane, causing attacks of asthma; and it was well known that certain articles of food caused rashes to appear on the body. The alimentary toxins showed a special affinity for nerve centres; the lethargy associated with intestinal stasis was within the knowledge of all. Sir Lauder Brunton had stated that the *Bacillus coli* seemed to have a special power of producing fatigue toxins. In five cases, all females, the speaker had seen purpura associated with intestinal toxaemia, and in nearly all there was mucous colitis and pyorrhoea.

Mr. J. G. TURNER was sure there was justification for the assertion that there was a toxaemia due to dental sepsis, the symptoms being due partly to local sepsis produced in the mouth, and partly to that manufactured in the alimentary tract lower down. Dental sepsis was due to four factors: dental caries, pyorrhoea, tartar, artefact conditions leading to sepsis; and they were all governed by the one root factor, stagnation—the stagnation of germs and of soft, sticky, starchy, sugary food; it might be termed germ carbohydrate stagnation. The mouths of fishes and of wild animals were free from dental sepsis. But when animals naturally wild were kept in captivity for exhibition and they were fed on bread and soft, pappy foods, their mouths became septic with pyorrhoea, tartar, and dental caries. Domestic dogs and cats afforded everyday examples of this. A considerable number of the monkeys at the London Zoological Gardens died from acute enteritis; long before this occurred pultaceous material could be squeezed from the gums. Marginal gingivitis was found in children of all ages, and it gradually merged into true pyorrhoea. He strongly advocated a return to whole-meal bread and the removal of all offending teeth. Man could live at all ages quite well without teeth. Everything in the mouth must have a smooth surface, and there should be no cavities or pockets for the accumulation of débris. Vaccines were likely to be unsatisfactory, as their effect was naturally evanescent.

Dr. A. F. HERTZ then read the paper published at page 817.

Mr. FRANK COLEMAN said toxaemia might be caused by the mouth in three ways: (1) Lesions of the buccal cavity, namely, of teeth and gums; (2) imperfect mastication, due to inefficient teeth or want of teeth; (3) mouth breathing. Lesions of the buccal cavity might allow of direct bacterial invasion of the blood, but some of the bacteria were also shed into the mouth and swallowed. The pulp of a tooth, so long as it was alive, could exert a defensive action against the invasion of micro-organisms; but when the pulp was involved by caries conservative dentistry was at best only a compromise. A pulpless tooth acted as an irritant, and the mucous membrane around such a tooth was rarely healthy. Carious cavities in teeth in which the pulp was not involved were a potential source of alimentary toxaemia. Caries being a gradual process, the patient was able to develop antibodies, which in some way neutralized the toxins absorbed from the teeth and gums. One might take the infective area as a square inch per affected tooth socket, hence the mouth might contain a very generous incubating chamber for harmful organisms. Gingivitis sometimes affected the mucous glands of the cheek, stippling it with greyish-white opaque nodules, which were firm and shotty to the touch. These glands had been found by Goadby to contain *Staphylococcus viscosus*. The scouring action of the tongue and lips was much diminished in defective mastication, and the deficient blood supply to teeth and gums during this defect also made the tissues less resistant. The only reliable treatment of sockets affected with pyorrhoea alveolaris was, he agreed with Mr. Colyer, the removal of their contained teeth.

Dr. GUSTAVE MONOD (Vichy) drew attention to the soil in the particular person as a special factor determining the manifestation of his disease. By hepatism, meaning inadequacy of the liver cells, a vicious circle was established, the toxins set free reacting in turn on the cells of the liver. The bowel then suffered a diminution of its tonicity, and there was a lowering of intraperitoneal pressure. Ptosis might then result, showing itself first on the hepatic flexure of the colon, then on the right kidney, and later on the stomach, left kidney, liver, and spleen. Glenard held that in most cases movable kidney was a sequel to toxaemia. One means of breaking the vicious circle was, he agreed with Dr. Mantle, by means of spa treatment.

The debate will be resumed on Monday, April 21st.

CLINICAL SECTION.

AT a meeting on April 11th, Sir W. WATSON CHEYNE, Vice-President, in the chair, the following were among the exhibits:—Mr. E. M. CORNER and Mr. P. H. MITCHENER: *Chronic bone disease.* At first the condition was thought to be syphilitic, and later on to be enchondromata. Finally the disease was regarded as due to developmental error, possibly connected with a nervous lesion. Mr. CORNER: *Ossification of the brachialis anticus* of a young man, presumably due to a partial rupture of the muscle. Mr. CORNER and Mr. C. V. ANDERSON: *Recovery after severe electric burns.* During convalescence signs of paralysis of the left median nerve developed, but no burn or scar accounted for it. The case ultimately recovered. It was suggested that it might be due to the passage of an electric current from below upwards in the nerve or to some electrolytic change. Mr. C. H. FAGGE: (1) *Myeloma* of the head of the tibia seven years after enucleation. (2) *Re-formation of the fibula after complete removal of the diaphysis* for acute infective periostitis. The patient was a boy, aged 11, and the infection was produced by the *Staphylococcus aureus.* The fibula had become almost completely osseous. Mr. LIONEL E. C. NORBURY: *Re-formation of the tibia after resection of the diaphysis* for chronic osteo-myelitis (?) syphilitic, in a boy aged 10. Dr. F. PARKES WEBER: Two cases of *Ateleiosis*; one of a man, aged 45, the other of a woman, aged 20, in whom was also a slight congenital malformation of the hands and feet. Both were imperfectly developed sexually, but mentally alert. Mr. P. MAYNARD HEATH: (1) *Pseudo-hypertrophy of the breast* in a girl, aged 16. There was no tumour in the enlarged breast, but it was lumpy and appeared to be divided into more or less separate lobules. (2) *Congenital cyst in the parotid region* in a girl aged 16. The swelling could be made to disappear on pressure. Mr. LAWRIE MCGAVIN: (1) A man, aged 32, who had sustained a simple fracture of both bones of the right leg. The fibula had been plated. Considerable swelling persisted in the right knee. (2) A man, aged 38, in whom Bassini's operation for double hernia had been followed by thrombosis of the left internal saphenous vein. (3) A man, aged 63, with (?) a mixed tumour of the left submaxillary salivary gland. (4) A boy, aged 16, who had had a psoas abscess which was possibly not tuberculosis. Mr. LOCKHART MUMMERY read a short paper on a case of *Ulcerative colitis* in a man aged 49, which terminated fatally. It was of interest for two reasons: First, because recovery failed to occur after appendicostomy; secondly, because the appearances produced in the colon closely imitated those of multiple polypi.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on April 3rd, Dr. STANLEY RISELEY (President) in the chair, Dr. A. G. YATES, in a paper, *Some recent conceptions of hysteria*, discussed, first, the etiology of functional nervous disorders. This was obscure because as yet no pathological changes had been found to account for them. This failure had in recent years led to an elaborate attempt to define the neuroses and explain their causes in terms of psychology. Symptoms were thus explained, not on the basis of physical changes in the tissues, but on that of abnormal mental functions. Both Janet and Freud assumed the existence of subconscious mental processes, the former arguing that in the hysterical mind the portion concerned with conscious mental activity was quantitatively diminished, and unable to contain at one and the same time as many thoughts, feelings, or emotions as the normal mind. The expression "field of consciousness" was a convenient one, to include the whole

mass of ideas, sense impressions, etc., of which a person was at any one moment conscious. It might be represented diagrammatically by two circles, one within the other. The inner circle would represent the particular idea, object, or feeling towards which the mind was at that moment directing its attention. In the outer circle might be placed all the other mental processes of which the mind was at the same moment conscious, but less distinctly. This was the peripheral portion of the field. The diagram might be still further extended by adding a third circle outside, to represent the subconscious portion of the mind. By such diagrams the normal could be compared with the hysterical mind, simply by making the circles representing the conscious field larger in the former than in the latter. In other words, a number of mental processes which in the normal mind were retained within the conscious portion were, in the hysterical individual, transferred to the subconscious area. Present sense impressions were often unable to gain admission into the diminished conscious area, with the result that anaesthesia was produced. In the hysterical fit, the area of personal consciousness was not merely diminished, but, for the time being, obliterated, and the mind dominated by some idea, impression, or event of the past. This mechanism was sometimes quite apparent, but not always. It seemed probable, nevertheless, that this apparently meaningless paroxysm was the result of some idea or memory of the past, fixed within the subconscious sphere in a mind in which that sphere was abnormally active and large, but possessed of a diminished facility or outlet into the neighbouring sphere of consciousness. Such a fixed idea from time to time burst its barriers, flowing out with irresistible force and flooding the already diminished field of consciousness; it thus took complete command of the individual and spent itself in a display of long-pent-up emotion. All the other phenomena of hysteria, such as occur during the interparoxysmal period, were likewise explained on the assumption of some fixed subconscious idea finding an outlet by these varied manifestations. Freud looked upon the condition as the result of some mental shock. The corresponding painful emotions, instead of gaining a suitable outlet, were repressed or driven down into the subconscious area of the mind, so that they were no longer felt. They were still active, however, and some outlet must be provided. This was effected by the conversion of these submerged emotions into the physical and mental phenomena known as the symptoms of the disease. By a method of treatment known as "psycho-analysis," Freud had been able to trace the connexion between some original painful emotion and such hysterical phenomena. It was a long and tedious process, but Freud believed that by analysing the enormous mass of ideas and chains of thought which he obtained, he could discover the hidden cause of the symptoms, and claimed that its revelation to the patient would effect a cure. These two theories resembled one another in assuming that the causative factor was some mental impression buried in the subconscious mind. Two cases were shown illustrating the rhythmical tremor of hysteria. In one case the left forearm had been partially paralysed from birth. It had, however, given no trouble until six months ago, when it became painful. Subsequently the tremor developed in it, and within the last few days it had also affected the other arm. Mr. W. W. KING, in a paper on the *Toxaemias of pregnancy*, said that these toxaemias often manifested themselves as disturbances of metabolism, which could be recognized by urinary examination. The nature of the toxin was unknown, but it was probably composed of a number of different elements, as suggested by Leith Murray. Recent work also indicated that the internal secretions from the ductless glands were important factors in toxaemic pregnancy. The early vomiting of pregnancy was not "physiological," and any but the mildest cases required treatment. The symptoms of pre-eclamptic toxaemia should be explained to all primiparae. Glucose in the urine in pregnancy might be due (1) to diabetes; (2) to hypersecretion from the pituitary gland; (3) to inability of the liver to store up glycogen. The last type was of toxic origin, and often associated with headache, neuritis, or muscular twitchings. The glucose disappeared when the patient was placed upon a meat-free diet.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT the March meeting, Dr. EURICH in the chair, Dr. OLIVER, in a paper on *Loss of sight from loss of blood*, said that in 106 cases of which he had discovered records most of the patients were over 40. In 25 per cent. of the cases the disturbance of vision occurred either during or immediately after the haemorrhage, in 20 per cent. within the first twelve hours, and later than this in more than half the cases. There was no constant relation between the amount of blood lost and the severity of the eye affection. In half the cases there was no improvement of vision. In complete blindness the pupils were dilated and showed no light reaction. Treatment appeared to be of little use. In introducing a discussion on the heart from the physiological standpoint, Dr. CLOW remarked that in any irregularity of the heart three things had to be considered: (1) The inception of the stimulus for contraction; (2) the power of conduction of the auriculo-ventricular bundle; (3) the capacity of the heart muscle to respond to the stimulus. In any given case of heart mischief it should be determined which of the following conditions was present: Was the nervous mechanism at fault? Did the fault lay in the condition of the heart muscle? If the muscle were good, was the load too heavy? In the first group—that is, the functional—there fell sinus irregularity, occurring chiefly in the young, and extra-systoles, occurring chiefly in elderly people. It was only since the introduction of the polygraph that these conditions had been understood. Drugs for the heart were unnecessary, but the exciting cause should be treated.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 19th, Mr. W. G. LAWS, President, in the chair, Mr. H. HERBERT, speaking of *Headache*, said that when headache was due to ocular causes it generally occurred fairly regularly after much use of the eyes; such headaches were not always cured by a visit to an oculist, because the patients sometimes omitted to wear glasses. In other cases, where manifest defects had been corrected, other defects became manifest later, and again, when patients were neurasthenic, they got into the habit of having headaches; sometimes the oculist was not allowed sufficient time to complete his examination of the eyes. Mr. H. B. TAWSE, discussing headache from a nasal point of view, said that it varied in intensity and character according to the locality of the condition originating it. In children adenoids frequently caused headache owing to the deficient oxygenation of the blood. Nasal polypi caused headache, but this was not constant. Other causes were the pressure of pus and hypertrophied tissue. The nose should be thoroughly examined in all cases of persistent headache.

At the meeting on April 2nd, Mr. R. G. HOGARTH, speaking of the production of *Local and spinal anaesthesia*, said that in using novocain it was not necessary to inject the solution into a nerve but only into the surrounding perineural tissue. When operating on small areas, it was sufficient to infiltrate the tissue for about two inches round the intended incision, with a 1 per cent. solution of novocain. In operating on such areas as the scalp or fingers it was sufficient to infiltrate at right angles to the sensory nerves supplying this area. For instance, the hand could be anaesthetized by infiltrating the median, ulna, and radial nerves. Brachial plexus anaesthesia could be produced by injecting 60 c.cm. of a 2 per cent. solution of novocain into the brachial plexus as it passed over the first rib. The three divisions of the fifth nerve could be anaesthetized as they passed out of the base of the brain. For goitre operations it was necessary to infiltrate underneath as well as all round the tumour. Empyemata could readily be opened by blocking the three intercostal nerves concerned. Mr. C. H. ALLEN, speaking of spinal anaesthesia, said that no very serious sequelae after its use had been recorded in this country. Headache and pyrexia very often followed, but the headache was generally relieved by phenacetin. The chief advantages of the method were absence of post-operative shock, complete muscular relaxation, no venous engorgements or respiratory movements, no starvation, and no post-operative sickness. As a disadvantage was

urged the uncertainty of the anaesthesia. The method was contraindicated in cases of advanced sepsis. It had been employed over 200 times at the Nottingham General Hospital without any fatality, and in very few cases was the anaesthesia imperfect.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on April 3rd, Mr. R. W. MURRAY in the chair, Mr. ARTHUR EVANS described three cases of *Acute pancreatitis* on which he had operated during the past eighteen months. The disease was commonly difficult to recognize and was often missed even in the *post-mortem* room. His first case was a dock labourer, aged 35, who had been drinking heavily for ten days and vomiting incessantly for sixteen hours. He had intense paroxysmal epigastric pain, the abdomen was retracted and fixed, especially in the upper part; he was delirious, with a rapid thready pulse and subnormal temperature. On opening the abdomen the under surface of the omentum was studded with white areas; the pancreas was a large mass of necrotic tissue. The patient died in six hours. *Post mortem* no calculi were found. The second patient, a woman aged 51, was fat and of alcoholic habits, and had a history of bilious attacks. She had been vomiting for several days and had pain in the upper part of the abdomen. There was no jaundice, no abdominal distension, but fixation of the upper part of the recti. On opening the abdomen there were white glistening plaques of fat necrosis on the omentum. The gall bladder contained thick viscid bile and small calculi. This patient recovered. The third patient, a healthy man aged 52, with no biliary history, was suddenly seized with severe epigastric pain and frequent vomiting. He had obstinate constipation followed by diarrhoea with green offensive stools; there was sugar in his urine. A month after this attack he was again seized with a similar attack. When the abdomen was opened there were extensive adhesions and the peritoneum was red, but no fat necrosis was seen. An irregular mass was found behind the stomach. This was drained. The gall bladder and duodenum were apparently normal. There was marked improvement after the operation, the sugar disappeared from the urine, and on the seventh day after the operation he became delirious, and died three days later. No autopsy could be held. After describing these cases, the speaker pointed out the common association of pancreatitis with gall stones; in making a diagnosis he thought the agonizing pain in the epigastrium with vomiting and collapse, tenderness and fixation in the upper part of the abdomen were the important signs. Cases were often mistaken for intestinal obstruction. Drainage of the abdominal cavity and, if necessary, of the gall bladder seemed the only treatment available. Mr. F. T. PAUL thought the intense pain in these cases was typical peritoneal pain and not due to the gland. Pancreatic cysts varied much in their results, some being easy to deal with, others discharging a secretion which was very injurious to the tissues. He had seen many obstructed bile ducts that did not cause acute pancreatitis; the causation of the latter condition was not clear. Mr. R. W. MURRAY thought the acute pain was due to the irritation of the parietal peritoneum. It was not clear how the pancreas became poisoned, and the mere blocking of the duct by gall stones might be doubted as the cause. He had seen a case in which these symptoms had come on suddenly after an operation on the knee-joint, and the patient died. Dr. STOOKES had seen a case in a woman sent into the Maternity Hospital for intestinal obstruction at full time; in that case Caesarean section was done. The child was dead; the whole of the small intestine from the jejunum to within three inches of the ileo-caecal valve was empty and collapsed. The peritoneal surface was everywhere red, the colour of tinned salmon, and studded with fine yellow spots; the large intestine contained gas, but was not over-distended; the small intestine, four inches from the caput coli, formed a loop with which the caput coli and the vermiform appendix hung down into the pelvis behind the uterus, the mesocolon being there about 6 in. long. No mass was noticed in the upper part of the abdomen. Was it possible that obstruction due to the long mesocolon had caused pancreatic trouble with the fat necrosis of the peritoneum? There had been vomiting and probably reversed peristalsis for several days. In replying, Mr. EVANS said that he thought that the acute pain and the extreme constipation might be due to the effect of the pancreatitis on the solar plexus.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

AT a meeting on March 28th, Mr. R. D. PUREFOY, President, in the chair, Mr. H. DE L. CRAWFORD read a paper on the *Intratracheal insufflation of ether*, and demonstrated the apparatus used by him. It consisted essentially in forcing etherized, warmed, and filtered air into the trachea at a point one inch above the bifurcation through a catheter which was passed through the larynx from the mouth. The air then returned between the catheter and laryngeal wall. The chief advantages were that it permitted full oxygenation of the blood even if both pleurae were opened, that no blood, vomit, or mucus could get down through the glottis, and that the anaesthetist was quite out of the surgeon's way in operations on the heart and neck. It was therefore indicated in operations on the thorax, head, mouth, and neck. He had found the method quite free from danger and very satisfactory, but emphasized the necessity for using an automatic safety valve of mercury. Mr. R. H. WOODS agreed with Mr. Crawford that this method of administering ether would probably be largely used in future in certain cases. The difficulty of bleeding about the throat during operations in the nose, mouth, and pharynx was a very real one, and up to the present the way in which it had to be got over was by performing a preliminary laryngotomy and administering the chloroform through a tube. This method answered very well, but it involved an extra operation—a disadvantage which the method thus described got over entirely. Sir JOHN LENTAIGNE said that he had often felt the need for some means of producing positive pressure to do away with collapse of the lungs in operations on the chest wall, and the instrument shown would appear to do this. Dr. KIRKPATRICK said the method described seemed to be one which would overcome some of the most serious difficulties which anaesthetists had to deal with. He did not know that the method spoken of by Mr. Woods was as safe as he had stated it to be, as the introduction of direct vapour by means of a tube without being heated previously was attended by a certain amount of risk, and he therefore considered that Dr. Crawford's method, since it got over this, was an improvement. The apparatus would be chiefly used for operations of the thorax, but he thought there was a considerable field of usefulness for it in upper air passage cases. He did not quite understand why it should have been specially useful for operations in the Trendelenburg position. As a sequence of the administration of an anaesthetic in this way was there any interference with the respiration? It was to be expected that after pressure had been kept up for some time there might be difficulty in re-establishing the respiration. Mr. A. A. MCCONNELL said that he had seen the instrument at work, and considered it as good as any he had seen. The expense of negative pressure cabinets had up to the present almost prohibited their use. Frazer of Philadelphia used the instrument in all his head cases. He also used it in the cerebellar cases, because in the majority of these cases there appeared to be some respiratory difficulty, and the instrument acted as the most efficient artificial respirator which could be obtained. Dr. NESBITT said that from the point of view of the physician he considered the apparatus a step in the right direction. He suggested that it was perhaps a trifle cumbersome, but had no doubt that this would be overcome. Mr. H. DE L. CRAWFORD, in replying, said that he did not think that the catheter offered any impediment in tongue cases. With regard to the use of the apparatus in the Trendelenburg position, what he should have said was that Frazer used the apparatus for operations in this position as the breathing appeared to be somewhat hampered, but it was not considered that any very great advantages attached to its use in that particular situation. Referring to Dr. Kirkpatrick's question as to the recovery of patients, he pointed out that the anaesthetic was not stopped until the pressure was beginning to be compensated. He considered that the instrument would be found much more portable than those previously in use.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

At a meeting on April 4th, Dr. G. P. Shuter, President, in the chair, the following were among the exhibits:—Dr. N. T. Whitehead (for Dr. Arthur Saunders): *Osteo-arthritis in a girl of 11 years.* A slight injury to the left hip occurred last October. Limitation of movement gradually set in, and recent investigation with *x* rays revealed lipping of the cartilage and the presence of osteophytes. No possible source of infection was found beyond the presence of two carious teeth. Dr. N. T. Whitehead (for Dr. J. M. Bernstein): *Stenosis of pulmonary artery.* The patient complained of great shortness of breath associated with pain over the cardiac area; the latter was only a recent symptom. There was some degree of cyanosis but no polycythaemia; the heart was dilated, especially to the right of the sternum. There were no dilated veins in the neck, and the liver did not pulsate. A systolic thrill could be felt over the pulmonary valve; a systolic murmur was audible over the whole of the cardiac area, but more especially over the pulmonary valve. Dr. Seymour Taylor said he would have expected in this case to have found evidence of the relief of the tension in the right ventricle along the line of least resistance—namely, through the tricuspid orifice—but he did not find any signs of this. He thought it possible the patient had aortic obstruction. Mr. Donald Armour: A boy who had received an *Injury to the ulnar nerve* by driving a splinter of glass into the palm of his hand. From the muscular wasting and paralysis it was clear that the deep branch of the ulnar nerve had been cut across just where it passed through the muscles of the hypothenar eminence in company with the deep branch of the ulnar artery. The superficial branch of the ulnar nerve had escaped, as shown by the fact that the inner side of the little and the adjacent side of the little and ring fingers were normal as regarded sensation. The muscles supplied by the deep branch of the ulnar—namely, the small muscles of the little finger, the inner two lumbricals, the interossei, and the two adductors of the thumb—were completely wasted. As suture was out of the question, Mr. Armour suggested excising the scar, in which no doubt the proximal end of the nerve was embedded, in order to give the nerve a better chance of regenerating. Mr. Tyrrell Gray mentioned a method, adopted in America, of scoring with a small tenotome the scar tissue in lines parallel with the nerve fibres with the object of opening up fresh paths for the regeneration of the divided fibres, but Mr. Armour did not think it applicable to this case. Mr. Sydney G. MacDonald: *Perineal testicle* in a man aged 28. The testicle was small and the scrotum on the same side imperfectly developed. The patient himself was well developed, cycled constantly, and suffered none of the usual inconveniences. Dr. T. C. Storey (for Dr. H. J. Davis): *Epithelioma of auricle* in a man aged 72. The growth commenced as a small lump on the outer border of the pinna, and finally broke and formed an ulcer. The auricle was removed and the considerable raw area resulting skinned over with remarkable rapidity. Mr. Oswald L. Addison: (1) *Genu valgum and dislocation of patella* in a stout middle-aged woman under treatment for osteo-arthritis, both legs being affected. The left patella lay on the front of the external condyle of the femur, the normal patellar surface of the femur being uncovered; on the right side the displacement was less extreme. The patient was unaware of the deformity, which had given rise to no trouble until the last few months, when she began to have severe pain in the left knee. (2) *Sporotrichosis* in the leg and thigh of a boy, aged 11 years. The condition did not come under observation until it had lasted a year, and was at first regarded as tuberculosis. Mr. N. Bishop Harman: (1) Exenteration of the orbit and partial excision of maxilla and ethmoid for *Rodent ulcer.* The patient, a woman of 54, first noticed a small pimple on the right cheek just under the eyelid seventeen years ago. It scabbed, and she treated it herself with various caustics whenever the lump reappeared. From 1905, *x* ray, zinc ions, and radium, each appeared to benefit her for a time. When seen by the exhibitor in 1911 with a view to operation she had lost the whole of the lower lid, and a rodent ulcer as big as a penny was fixed to the maxilla. An operation for removal of the growth was performed, and all seemed well until September, 1912, when there was recurrence in the orbit. A second extensive operation had then to be undertaken, with the result that the orbit, nose, and antrum, were opened into one. The great cavity left gradually sank in a remarkable way, leaving the passage of the nose exposed to view in a striking manner. There had been no lack of treatment, but an earlier appeal to surgery would have left the patient with a sound face and two good eyes. (2) *Two cases of excision of the lacrymal sac* in young women. The results in both cases were excellent.

UNITED SERVICES MEDICAL SOCIETY.

At a meeting on April 9th, Fleet Surgeon Bassett-Smith, R.N., President, in the chair, Major Howard Ensor, D.S.O., in a paper on the *Duties of an Officer of the R.A.M.C.* attached to an infantry battalion on active service against a civilised enemy, held that a camp should be regarded as "standing" when the troops had been in occupation of it for twenty-four hours and no orders had been issued for them to move. After the expiration of this time, in the absence of orders for the battalion to move on, the site of the camp should be regarded as an area likely to be occupied by the unit for some considerable time, and the necessarily primitive system of sanitation prevailing when a battalion is bivouacking for the night only should be changed for the more elaborate one suitable for a standing camp. This would prevent the serious error of postponing the institution of sound sanitary measures in expectation of orders arriving for the troops to move almost immediately; such a mistake frequently led to the men remaining under undesirable conditions for several days. The sanitary condition of a camp was, perhaps, the best criterion of the state of discipline of the troops occupying it. A matter of great importance was the cleansing of bivouac areas before starting on the march next day, as the same area was likely to be occupied by other troops at an early date. While advocating the early transfer of febrile cases to the field ambulance when troops were on the march, the speaker favoured retaining men suffering from a moderate degree of fever with their unit, when in standing camp, for forty-eight hours, isolating them, as far as possible, in tents or shelters until it was clear that they were not likely to prove able to continue at work. Cases sent to the ambulance tended to be evacuated to the lines of communication and were lost to their battalion. In regard to duties during action, he recommended a very thorough training of the regimental bearers in the application of the first field dressing, and that they should be employed for this purpose and the protection of casualties by the erection of temporary cover, rather than for the carrying of wounded to the aid-posts, during action. Battalion stretchers, instead of being carried behind the companies by the bearers at the beginning of an action, should be carried on a cart, under the care of one of the R.A.M.C. detachments, and only brought into use when darkness or a lull in the fighting permitted the safe clearing of the wounded from the area of operations.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

At a meeting on April 1st, Dr. Mary Murdoch (Provincial Vice-President) in the chair, Dr. Helen Boyle read a paper on *Early nervous and borderland cases*, including under this title cases in which nervous and mental symptoms predominated, but which were uncertifiable and had no outstanding organic disease. There was a class of emotional, highly-strung, nervous individuals very little likely to become insane, the expression of their emotions acting as a safety valve. It was often the emotionless being—who did not show distress, who was endowed with hyperstability, and was considered the prop of the household—who was liable to break down after the need for bearing up had passed, sometimes even after some months. Fat neurotic subjects were more difficult to treat than thin ones. There should be wards in general hospitals for the treatment of borderland cases. The patients would thus be freed from the stigma attending sojourn in a hospital or home for mental cases, while at

the same time the student would have the opportunity of studying this important branch of medicine. With regard to sedative drugs she advocated the use of paraldehyde, especially for senile cases, of bromides combined with arsenic, and of trinitrin in small doses; the latter by acting as a vaso-dilator often removed the necessity for a true sedative. She objected to the administration of sulphonal, recommended care with hyoscine, and said that nux vomica often excited nervous patients, and in some was inimical to sleep. Dr. DOBSON considered that dyspepsia and dilated stomach, so often found in melancholics, was frequently due to forcible feeding. Dr. CONSTANCE LONG pointed out that however much one might disagree with the universal application of Freud's views, he had unmasked the etiology of certain obscure cases of hysteria with absolute precision, and had indicated a line of treatment of inestimable value if skilfully applied. She agreed as to the value of wards for borderland cases in general hospitals. Such cases were to be found in numbers among the patients of the average general practitioner, who was launched into practice with little or no knowledge of morbid psychology. Other members having spoken, Dr. BOYLE, in reply, stated that in her experience operations for haemorrhoids had been more frequently followed by insanity than had any other operation.

Reviews.

MALINGERING.

A Greek I fear,
Though presents in his hand he bear.

THESE words came into our mind as we read the Dedication of Sir JOHN COLLIE'S book on *Malingering and Feigned Sickness*[1] "To my friend the British Workman, to whom I owe much." And we wondered in what spirit the British workman would regard it, and how he would receive the teaching of the book if he ever looked inside it. Certainly Sir John Collie is well qualified to speak with authority on malingering, as for many years he has been closely associated with insurance work, and with the consideration of questions of compensation for personal injuries received during employment. Indeed he has almost established himself as a specialist in the subject, and he suggests on the first page of the preface the point of view which he is inclined to occupy concerning it—"The cost of insuring against accidents to industrial workers is now far in excess of the actuarial estimates upon which the Compensation Acts were based; and a study of the statistics in relation to non-fatal accidents shows an increase in the number of those accidents since the advent of this legislation which cannot be accounted for even by the speeding up of machinery and the conditions of modern labour. Malingering and dishonesty must have had an influence in raising the figures to their present abnormal height." And in the opening of his book he again insists that the many provisions made by the Legislature in recent years for securing benefits to injured workpeople have undoubtedly given rise to a large number of cases of malingering. He says that the methods of the conscious deceiver are so ingenious, and the mental outlook of the unconscious exaggerator is so difficult to deal with, that the time has fully come for all medical men to look for the possibility of deceit or exaggeration in all persons claiming compensation for injuries.

We are not prepared to quarrel with this piece of advice. Every medical man should know not only something, but a good deal, upon this increasingly important subject, should be prepared at any time to make a thorough examination of such an applicant and to be ready to give in a Court of Law the reasons for his conclusions; and this he should be able to do in the simplest possible language and with the studious avoidance of needless technical expressions. We must confess to having heard members of our profession in the witness-box make use of words and language which can have had but the effect of puzzling the lawyers, bewildering the jury and increasing the obscurity of the problem before them. We claim that all medical men should be fully acquainted with the ways leading up to the court and with the correct manner of procedure when in it. And we should greatly regret to see these important questions of real or fictitious injury left in the hands of only a few, some of whom might be looked upon as professionally and habitually inclined to take the workman's view and others that of the employer. Such a state of things could not fail to place our profession in an unfavourable position before the public. We do not wish to labour this point, and will content ourselves with the expression of the opinion that cases of this sort ought in all cases to be settled by a Judge in conference with a permanent Board of Medical Referees. We think that if the Lord Chancellor, the Home Secretary, the Chancellor of the Exchequer and the President of the Local Government Board would consider the question and agree upon the appointment of such a Court, its early establishment would prove extremely acceptable to the public and agreeable to the medical profession. Indeed, common sense appears to demand it.

The short accounts which Sir John gives of the ways of malingerers are graphic and interesting. A first-class humbug was before the Judge complaining, amongst other things, of loss of sensation in the fingers of the left hand. He was told to close his eyes and hold up both hands and to say "Yes" or "No" when either of them was gently pricked by a pin. Unfortunately for the man he called out "No" each time the pin touched the hand in which he said there was no feeling! This report brings to mind a somewhat similar case in which the malingerer hopelessly "gave himself away" (to use a common expression): A soldier in a British regiment in India was, for reasons of his own, shamming deafness—absolute and complete. No one could do anything with him or make anything of him. At last he came up before the Principal Medical Officer, who, receiving no answers to his questions, turned to his brother officers and said in the man's hearing, "Yes, a sad case of incurable deafness." He then made signs to the man to pick up his clothes and leave the room. But just as he was opening the door the doctor tossed a coin on to the floor near him, and the man, hearing the jingle, instinctively turned to see if he had dropped anything! Confinement to barracks and extra work ensued.

The chapter on the psychology of the fradulent mind is excellent, and refers to the remarkable difference between the pain which a man has when he strains his back in his own garden or in the carriage of a rich railway company; and the problem arises as to whether, in the latter case, he is a wilful malingerer or the victim of psychical conditions consequent on the accident. But the author rightly reminds us that all malingering is not the outcome of deliberate wickedness, and that great allowance must be made for the personal equation. Certainly the uneducated workman who has met with an accident is, as a rule, unable to take a detached view of himself, or to make a stand against undesirable introspection. Pity is freely offered—and rightly so—to those medical men who have to look to club practice as the chief source of income, who have to seek for popularity from the members, and who, in consequence, are easily induced to write certificates for sick benefits. Such "kindness" is mistaken and harmful. It is surely the duty of every medical man to help the State to count amongst her citizens the maximum number of units capable of working. Professionally, it is, of course, very discreditable.

The medical examination of a patient who says that he has been injured at his work presents a problem not always easy to solve. In the ordinary way of practice an honest patient coming to his medical man is anxious to get well, and is helpful in the way in which he answers questions. But the other man is apt to keep things back, and to do his utmost to mislead. Probably every medical man is not aware of the fact that by the terms of the Workmen's Compensation Act a servant who is making a claim for personal injury is bound to submit himself to medical examination, and that if he obstructs the examination the half wages which he has been hitherto receiving will cease in accordance with the provisions of the Act (p. 34). It is within the knowledge of most of us that claimants are apt to make themselves extremely disagreeable, and

[1] *Malingering and Feigned Sickness.* By Sir John Collie, M.D., J.P., assisted by Arthur H. Spicer, M.B., B.S.Lond., D.P.H. London: Edward Arnold. 1913. (Med. 8vo, pp. 352; figs. 44. 10s. 6d. net.)

sometimes even obstructive, at an examination, and it is well that the Act has thus provided the medical man with some friendly assistance.

The keynote of the book is on page 35, where it is said that the examiner should be absolutely unbiassed and judicial in his attitude towards the case, and, whilst alive to the possibility of malingering, should equally be on the look-out for every indication of organic disease. That he should not be biassed in favour of the insurance company, nor should he minimize disabilities which do exist. It is indeed a counsel of perfection, but nothing less would be acceptable to the straightforward practitioner. During the medical examination it must be insisted that no third person should be in the room, as "allegations of unfair treatment and harshness are not unlikely to be made"; and even though they were groundless, if they were supported, they might lead to inconvenience. This is an important matter, and many a medical man may have been in doubt as to how he should answer the demand of a solicitor or some other third person who is not a medical man that he shall be present when the examination is made. The answer ought to be a polite "No," though, of course, the presence of the workman's own medical man is not only permissible but, as a rule, desirable. It is clearly pointed out that the medical man should keep far away from the legal aspect of the case; the question of liability is as nothing to him—he must mind his own business. And still more is it advisable that he should have nothing to do with the discussion of pecuniary compensation, though it is often advisable that he should have been informed as to the claim which a man is making so that he may understand in some measure the position which the man is occupying.

The two pages treating of *Neurasthenia* are perhaps inadequate. The term is an extremely popular one and a great favourite in a court of law, especially when it is qualified by the word *traumatic*. Voltaire regarded adjectives as mortal enemies of substantives, but he would have found it difficult to shut out this adjective from qualifying the shapeless word "neurasthenia" as used in the law courts. The two words are almost inseparable in the presentation of the case of the injured workman—especially in the absence of objective signs. It is not improbable that Sir John Collie's scant treatment of this part of the subject is due to an absence of sympathetic interest in it. Possibly even he has heard so much of it, and seen so little of it, that his belief in it is but half-hearted—or worse.

In the face of the encouragement which recent legislation has given to dishonest men to exaggerate or fraudulently to misrepresent the amount of damage which they may have met with in the course of their work, the thought naturally occurs as to what effect the Insurance Act will be likely to have in that direction. Sir John Collie speaks with authority on the subject, and says that (p. 61) for some years the accident laws have revealed to the unscrupulous the infinite possibilities of fraud, and he feels confident that, unless this fact is recognized by those who will have the responsibility of working the Insurance Act, "the moral currency" of the working classes will be much debased. Once more we turn to the beginning of this complete and valuable book on Malingering and, smilingly, try to catch the true inwardness of that Dedication.

Again (p. 100), in discussing the dishonest fostering of morbid sensations after an injury, he says that physically these men are perfectly able to work, provided they have sufficient stimulus, but that "the Workmen's Compensation Act deprives them of this stimulus." He has already (p. 9) told us of a man who was in receipt of 15s. a week (half wages) and at the same time was drawing 18s. a week from the Hearts of Oak, 10s. from a yard club and 10s. from a slate club, making in all £2 13s. whilst he was disabled, his wages being £1 10s. when he was hard at work. It was, indeed, a temptation to which many a workman might be inclined to yield! Consciously or unconsciously the injured man cannot exercise his will-power; the whole burden of his complaint lies in what he *feels*, and he becomes so "demoralized by idleness that he is determined he shall not work." It is a humbling kind of picture to paint of the British working man, and we feel sure that such a one would have no right to claim any share in that noble Dedication.

As under the National Insurance Act some twelve millions of workpeople have just been compulsorily insured, "malingering must necessarily become more frequent." In Germany since the passing of their Insurance Act the amount of malingering has gone up by leaps and bounds. The prospect is not pleasant, and as sickness benefit is only payable from the fourth day of the illness there may be a strong temptation to prolong slight ailments. It seems that when the French Republic took over the railways a remarkable demonstration of the servants' "right to illness" was manifested, 54 per cent. of them becoming "ill" at one time or another in the year. "To men between 60 and 70 years of age there will be a strong temptation to defer the return to work. There is the danger, too, of attempts being made to tide over periods of unemployment by going on the sick list," and Sir John appears firmly to hold the opinion that his "friend the British workman" will fail to stand upright in the midst of the manifold and great temptations which henceforth surround him.

The question of returning to work after an accident is sometimes made more difficult by undesirable influences privately brought to bear on the man. In one case of a typical neurasthenic the County Court Judge hinted that it should be decided before the Court of Appeal whether an employer must continue to pay weekly wages to a man who only *thinks* himself unfit for work. The County Court Judge thought that the man had been only playing at work, and he was of opinion that if he had been rich and desired to get back to hunt or shoot he would have done it. The Master of the Rolls, before whom the case came in due course, said that he did not wish to use the word "malingering," but he could find no other word to express what was in his mind. He thought the County Court Judge meant that the workman had left his work under circumstances which threw suspicion on his conduct, and that it was impossible, upon their findings, to interfere with his decision; that there was no doubt that the result of payment of compensation took away all stimulus for work (p. 269). To men like this it is not a matter of shame, but one of delight, to eat the bread of idleness. As to how long a workman who has been undoubtedly injured may postpone his return to work after he has recovered from his original injury is an interesting question. Muscles accustomed to regular and steady exercise soon get out of condition, and this loss of condition frequently conduces to a postponement of the return to work. "A workman can, according to the Act, be compensated for what he is unable to earn, but cannot be compensated for what he declines to earn."

One of the commonest complaints in connexion with injury is pain in the back, which is sometimes, no doubt, the result of a rupture of muscular or ligamentous fibres, but which "in the days of Erichsen used to be called 'railway spine.'" "Concussion of the spine" (*spinal cord* was meant) is quite unlikely to happen, and organic nerve-changes, apart from an old syphilitic infection, need scarcely be discussed. But the dull pains of old rheumatoid disease of the spine are likely to attract much personal attention after an injury, and, "remembering the Workmen's Compensation Act, the workman puts himself on the sick list, keeps his back stiff, becomes introspective and then draws from clubs and insurance companies sick pay which might (as already shown) amount to more than the man's ordinary wages" (p. 135). This may read as a hard-hearted quotation, but there are many practitioners who could speak to its truth. The tender care which has lately been lavished on the British workman has submitted him to the risk of excessive "softness" and vulnerability, but we hope that when he finds that an important work on shamming and "skrimshanking" has been dedicated to him he will harden his heart and stiffen his back in the right way. Not only are workmen shown by our author to be sometimes deficient in honesty, but medical men are occasionally found not entirely free from blame in that they are ready to give certificates of "inability to work" without even making an examination of the patient, and to fall in with the request of the patient lest he should be regarded as wanting in sympathy, and so render himself unpopular with the other members of the benefit club. One malingerer said that he could get as many certificates as he wanted "in exchange for sixpences" (p. 16). For our own part, we will say that no medical man should give

a certificate without assuring himself on each occasion of the absolute correctness of the man's statements. Friendly but firm encouragement to return to work is in every way kinder to the man than a careless help towards his becoming a shirker—and this sound teaching runs like a golden thread all through Sir John Collie's writing.

The association of hernia and malingering is especially close, because it is open to any workman who has a hernia to make capital out of it, and there may be little to depend on but the man's statement. "Of the cases that claim compensation for damages for hernia as being caused by a sudden strain, probably not one in ten is genuine" (p. 189). And the question arises whether it would not be wise for all employers of labour to require a medical examination as regards the presence of rupture in all applicants for work. The Report of the Departmental Committee on Compensation for Industrial Diseases advised to the effect that hernia may, though very rarely, be due to a sudden strain, but that what usually happens is that some cough or particular strain brings down a little further a slowly developing hernia and so causes it to attract attention. This is probably the almost universal state of affairs; the funicular process of peritoneum, never having been obliterated, had been all along prepared for the reception of the piece of omentum or bowel. It is within our knowledge that a man who declared that he had never previously been ruptured claimed damages for the recent occurrence of a hernia in his work when careful examination showed the scar of an operation which had been done in his boyhood for the so-called "radical cure." The author rightly says that the question of how far a rupture can be called "accidental" is a thorny one. "We should hear much less of hernia in the law courts if working men who have been operated on would, six weeks from the operation, consult the surgeons who operated as to their fitness or otherwise for work, instead of going to lawyers and to the 'expert witnesses' who are associated with some of those gentlemen" (p. 199).

The position of the medical man with regard to his patient, and the advice which he should give to him, and the evidence which he must be prepared to supply in Court should, of course, be entirely clear of personal influence. Friendship with the patient ought in no way to be allowed to warp the judgement of the medical man, nor should the wish to see the claimant succeed in his suit deflect his statements a hair's-breadth from the line of truth. The medical practitioner must realize the fact that what he says should by no means be directed to secure a verdict but to help the Court in arriving at a just one. And as regard the so-called "medical expert," he should give his evidence as if it were being listened to by the Council of his College or the medical members of the Senate of his University. Certainly the giving of his testimony should be independent of what may prove to be the verdict of the Court. Yet "a medical expert told me that the usual terms upon which he and several of his friends contracted with running-down solicitors were: 'No damages, no fee; but the lost fee to be tacked on to the next case'" (p. 239). A line of conduct less worthy of a member of either the profession of Law or of Medicine can scarcely be imagined! Thus, "all chance of future employment by his patron, the solicitor (and even his fee), depend upon his grossly exaggerating when giving evidence on oath."

If this book (which we have read with great satisfaction and profit) says hard things of the British workman and of certain members of the medical profession, it does not let the lawyers off free, though the author speaks with due respect of the Judges, all of whom, by the by, appear to have regarded the claimants' attitude from the same point of view as did the author. Of the solicitors' touts who hang about the doors of the hospitals in the hope of finding work by stirring up litigation, nothing can be said bad enough. In a recent accident which occurred in London, on the following morning most of those who had been hurt had as many as four letters from different legal aid societies offering to take up their cases free of charge and recommending them to have nothing to do with persons responsible for the accident! It would be difficult to imagine members of the *medical* profession falling so low as this, and should a line of conduct of a similar degrading nature be adopted by any of them, we might depend upon the General Medical Council, if the facts were laid before it, taking immediate steps to vindicate professional honour. "The methods of some of these legal aid societies have at various times been commented upon from the Bench, but as yet nothing has been done" (p. 291). The movements of our sister profession are proverbially slow.

Sir John Collie's book is written in pleasant style, and though he is often dealing with abstruse questions he is never dull. There is often a suggestion of Sherlock Holmes in the way in which he has dealt with, sniffed out, and exposed deliberate instances of fraud, but although the author invariably comes out triumphant, the cases are not set out boastfully and they form excellent reading.

SMALL-POX AND VACCINATION.

THE volume, *Studies in Small-pox and Vaccination*,[2] by Dr. WILLIAM HANNA, is not a textbook on vaccination. It deals mainly with methods of measuring the efficiency of the vaccination in the case of the vaccinated and with the power of vaccine lymph to abort the variolous poison. It has long been recognized that the effect of vaccination varies considerably even when the operation has been perfectly done and fresh lymph only used. The protection it gives is not always uniform in what may be called "its length of life"—that is, the durability of the protection obtained. The recent epidemic in Liverpool bears the usual weighty evidence in support of the influence of vaccination. The mortality among 943 cases of vaccinated children was 2.9 per cent., while among the 2,220 unvaccinated children it was 27.2 per cent.; the ratio of deaths to attacks was thus nearly ten times as many in the unvaccinated as it was in the vaccinated. Dr. Hanna gives notes of many severe cases among the unprotected, where vaccination carried out promptly resulted in rapid pustulation and drying up of the rash. He suggests that probably the protection to adults by revaccination lasts much longer than the same operation in children. In discussing the interaction of concurrent variola and vaccinia, Dr. Hanna expresses the opinion that cow-pox or vaccinia may be accepted as an attenuated descendant of small-pox, and that it would be desirable to vaccinate every one threatened with variola as early as possible in the illness. Dr. Hanna has done well to encourage the practice of using vaccination as a remedial measure at the earliest possible moment when variola is suspected as present.

FOOD AND DIETS.

IN the review of Dr. J. CRAIK TAYLOR'S *Diet Charts for the Use of Physicians*, Part II, published in the JOURNAL of April 5th, p. 718, certain errors were made which we desire to correct. The statement that ordinary bread was omitted is incorrect, and was due to an oversight, for which we express our great regret; ordinary—that is to say, non-proprietary—bread is mentioned in all the charts. The review stated that the diet charts were open to the criticism that they contained "excessive recommendation of proprietary articles"; Dr. Taylor calls attention to the following paragraph in the preface to the first edition of the *Diet Charts*, Part I:

> Many proprietary foods are included in these charts as the compiler and leading physicians to whom he has gone for advice on this point are of the opinion that no difference exists between the recommendation of such foods by practitioners many times each day, and presenting similar advice upon a printed slip to patients. Further, there is no bias in favour of any particular food, as many are included and none is given a more favourable position than another.

The criticism was directed not to the mention of proprietary articles but to their frequent mention, as is shown, we think, by the use of the word "excessive." There was no intention to impute unethical conduct to Dr. Craik Taylor, and we do not feel that the words used in the review, taken in their ordinary sense and in the context, bear such an interpretation, but we emphatically state that they were not in any remotest sense intended to bear this interpretation, and that we entirely exonerate the author from having in any way

[2] *Studies in Small-pox and Vaccination*. By William Hanna, M.A., M.D., D.P.H. Bristol: John Wright and Son, Ltd.; London: Simpkin, Marshall. 1913. (Cr. 4to, pp. 53; plates 25. 7s. 6d. net.)

violated an ethical rule of the profession in this respect. In the review objection was taken to the mention of sherry in the chart for diabetes on the ground that it contains a good deal of sugar. The author points out that only dry sherry is mentioned, and that three analyses quoted by Hutchison give 0.215, 1.03, and 0.65 as the percentages of sugar present in three classes of sherry. Taking the first figure (for Amontillado) as typical for dry sherry, the amount is very small, and the criticism in the review was therefore mistaken and is withdrawn. The reference to the "classical formula" for imperial drink was based on recollection, but reference to standard works shows that the ordinary formula in use is as stated in the charts—namely, one drachm or less to a pint of water. With regard to the observation in the review that the medical attendant is advised in subacute and chronic nephritis to regulate the amount of meat "by the output of albumen," Dr. Taylor calls attention to the words of the paragraph in the preface to the chart to which this has reference; they are: "In the chronic type the absolute deprivation of proteid is not now practised, but the quantity of proteid allowed should be small and carefully regulated according to the output of albumen." We regret that the word "meat" should have been used in the review instead of "proteid." Dr. Taylor considers that the amount of urea is not, so far as we at present can be certain, of so much importance as the output of albumen. This is, of course, a matter of opinion, and there are, no doubt, many authorities who will agree with him. The review asked why "sweet potatoes, which are not often seen in this country," are recommended in the chart for the feeding of school children. To this Dr. Craik Taylor replies, first, that when he was a lad in Ayrshire sweet potatoes were a regular dish for some weeks in every year—a dietetic custom of which we had not previously heard; and, secondly, that the charts are not meant for circulation in Great Britain alone, and that orders received by his publishers show that the charts will be used in the colonies. This we recognize as a sufficient answer to the question.

NOTES ON BOOKS.

A PAMPHLET, entitled *Bex-les-Bains*,[1] contains a description by Dr. E. DE LA HARPE of the small Swiss health resort, better known, perhaps, as Bex-Salines. It lies just inside the opening of the Rhone Valley, about twelve miles from the end of Lake Leman, and at an elevation of some 1,400 ft. Its summer climate is sedative, and it possesses a mineral water spring conspicuous for a high proportion of chlorides, chiefly sodium, together with traces of bromide and iodide of magnesium. Its bath establishment was brought up to date last year, and the claims of the place to consideration lose nothing through being described by a medical man who is a recognized lecturer of the University of Lausanne on the subject of balneology and possessed of long experience of practice during the season at the place in question.

India possesses a perennial charm for the great majority of English men and women, many of whom are bound to it by the ties of old association, and consequently there is always a large demand for books that treat of this particular portion of "the gorgeous East." But whilst the literary market is usually overstocked with novels dealing with the Anglo-Indian adult, few writers of fiction, with the exception of Kipling, have attempted to portray the life of that interesting product of imperialism, the Anglo-Indian child. Mrs. HOBART-HAMPDEN, therefore, has almost broken new ground in her pretty story, *Tota*,[2] in which she relates the adventures that befell the little daughter of an English official in an out-of-the-way corner of India when kidnapped by the servants of a neighbouring rajah to be the bride of his only son. The story of the child's rescue from the rajah's palace by her elder sister and her father's faithful bearer is exciting enough to satisfy the most exacting of its childish readers. Mrs. Hobart-Hampden has evidently an intimate knowledge of native life and customs. She has drawn a most lifelike picture of the squalid splendour of the Deoban court, and the character of Tota, the pampered little prince whose love for his English playmate inspires him with the longing to prove himself a man, is developed with real insight and sympathy. *Tota* should find a large circle of friends amongst the English children whom he admired so heartily, and who will doubtless hail with pleasure this new departure in nursery fiction. Their enjoyment of an excellent story will be much increased by the pleasing illustrations contributed by Miss Alice B. Woodward.

The sixth volume of *The Prescriber*[3] is a collection of the issues of the monthly publication of that name. In this Mr. THOMAS STEPHENSON supplies his readers with short editorial notes on current questions connected with therapeutics and treatment, together with one or two short original articles on the same subject, one or two prescriptions derived from various sources, a few reviews, and abstracts of papers of direct therapeutic interest which have recently appeared in British and foreign journals. The editorial comments are notably free from bias, and, as we indicated last year, the complete volume forms a useful kind of reference book to the progress of therapeutics and pharmacy during the year to which it relates.

The fifth edition of *A Manual of Personal Hygiene*[4] has, like the earlier issues, been edited by Dr. W. L. PYLE of Philadelphia, while the various articles are the work of ten American writers. The idea of the work would appear to be to supply information on any point connected with the care of the body and the maintenance of health, in which members of the general public, either through their own experience or statements made in newspapers or suggestions made to them, commonly take an interest. The opinion of the various authors as to these matters is set forth in plain terms, and the physiological and anatomical data on which the views are based are described in language free, so far as may be, from technical words. As a further help to the reader a glossary of such technical words as are used is supplied at the end of the volume. In most of the chapters the teaching is well expressed and seems sound, but there is a most unhappy falling off in the appendix, in which directions for the treatment of the apparently drowned are given.

The second edition of *Dental Anaesthetics*[5] constitutes, like its predecessor, a summary of the lectures which its author, Dr. W. E. ALDERSON, delivers at the School of Dentistry at Newcastle-on-Tyne. The statements made are usually succinct and clear, and the present edition contains new matter dealing with the prolonged administration of nitrous oxide and the simultaneous use of nitrous oxide and oxygen. An important contribution to the volume is supplied by Mr. John Bolam, who deals fully with local anaesthetics under the heading of analgesia, and shows clearly that none of them should be used without full recognition of the fact that in some degree both immediate and subsequent risks are involved.

The twenty-second series of *International Clinics*[6] consists, like its predecessors, of four volumes, issued nominally at three-monthly intervals. Also, like its predecessors, it has as editor Dr. H. W. CATTELL, of Philadelphia, who works in collaboration with some ten or twelve authorities resident in America, Great Britain, and on the Continent. The contributors are drawn from all parts of the world, and in this particular issue include a somewhat larger proportion than usual of other than American authors. All the four volumes are illustrated, and each contains two dozen or more papers written specially for this publication. Between them they represent practically all branches of medicine and surgery. Even the National Insurance Act is not overlooked, for a paper on this subject, by Dr. J. W. Ballantyne of Edinburgh, forms part of the second volume; wherein, too, the science and practice of eugenics, or race culture, are dealt with by Dr. Meyer Solomons of Washington. The same volume, among a number of articles on anaesthesia,

[1] *Bex-les-Bains.* Notice Médicale par le Dr. Eugène de la Harpe. Bex-les-Bains: Imprimerie E. Oppliger. 1913. (Demy 8vo, pp. 63.)

[2] *Tota.* By Mrs. Hobart-Hampden. Illustrated by Alice B. Woodward. Published by Macmillan and Co., Limited. 1912. (Pp. 259. Price 3s. 6d.)

[3] *The Prescriber.* Edited by Thomas Stephenson, Ph.C., F.R.S.E., F.C.S. Vol. vi. Jan. to Dec., 1912. Edinburgh: *The Prescriber* Offices. 1913. (Demy 8vo, pp. 334.)

[4] *A Manual of Personal Hygiene.* By Walter L. Pyle, A.M., M.D. Fifth edition, revised and enlarged. Philadelphia and London: W. B. Saunders and Co. 1912. (Post 8vo, pp 530; figs. 131. Price 6s. 6d. net.)

[5] *Dental Anaesthetics.* By W. E. Alderson, M.D.Durh., M.S., B.Hy., D.P.H. With a contribution on Analgesia by John Bolam, L.D.S.Edin. Second edition. Bristol: John Wright and Sons, Ltd. 1912. (Pott 8vo, pp. 115. Price 3s. net.)

[6] *International Clinics.* In four vols. Twenty-second series. 1912. Edited by Henry W. Cattell, A.M., M.D. Philadelphia and London: J. B. Lippincott Company 1912. (Medium 8vo, pp. 314, 324, 316, 308. Price, four vols., 35s. net.)

includes an outspoken protest by Mr. Lawrence Irwell in regard to the practice in America of employing nurses as anaesthetists. The third volume is made notable through a rendering by Dr. S. W. Carruthers, of Norwood, of the Latin pamphlet in which Professor Theophilus Ciesielski has set forth his experiments and views on the question of how it happens that the offspring of plants, animals, and man may sometimes be male, sometimes female. Also recorded in the same volume by Professor J. B. Roberts, of Philadelphia, are two cases in which the operative fixation of a fracture of the shaft of the femur was followed by death.

Dickens is generally believed to have drawn the noble character of Riah in *Our Mutual Friend* as a set-off to the loathsome figure of Fagin in *Oliver Twist*, which had justly offended the Jews. In the same way Mr. GEORGE TRELAWNEY would seem to have written his recent novel, *The Story of Harvey Sinclair*[7] as an atonement for his book *In a Cottage Hospital*, to the misleading and offensive character of which we felt compelled to call attention in the JOURNAL (March 23rd, 1912, p. 691, "The Man with the Muck-rake"). It is satisfactory to find that Mr. Trelawney's opinion of hospitals has apparently undergone a considerable change. His new book contains a glowing account of the care and consideration lavished by the whole personnel of a hospital upon the inmates of its wards, and even the much-maligned medical student comes in for his share of praise. This complete *volte-face* is the most interesting feature of the book. Harvey Sinclair's adventures in search of a woman willing to become the wife of a dying man do not make agreeable reading. It requires the genius of a Maupassant to paint man in all his coarseness and brutality without losing the dignity and restraint of the true artist; and Mr. Trelawney would do well to study the methods of the great masters of literature before venturing once more amongst the pitfalls that beset the path of a writer of realistic fiction.

[7] *The Story of Harvey Sinclair.* By George Trelawney, author of *In a Cottage Hospital.* London: T. Werner Laurie, Ltd. 1912. (Cr. 8vo, pp 224. 2s. net.)

MEDICAL AND SURGICAL APPLIANCES.

Medicated Oxygen Bottle.

SIR LAUDER BRUNTON (London) writes: It is not infrequently desirable to administer amyl nitrite or ethyl iodide along with oxygen to patients suffering from anginal attacks or spasmodic asthma. This is usually done by putting the medicament upon a piece of blotting paper or cotton wool in the funnel or inhaler close to the patient's face. The inconvenience of this is that it is apt to move from its position, and there is no means of regulating the strength of the inhalation. To obviate these inconveniences a bottle has been made for me by Messrs. Allen and Hanburys with two metal tubes arranged similarly to an ordinary Wolfe's bottle. One of these, however, can be moved up and down and fastened by means of a screw, as shown in the drawing. The cotton wool or blotting paper, moistened with nitrite or iodide, is placed in the bottle. At first the movable tube is drawn well up, so that as the oxygen passes through it over the wool the vapour is dilute. As the nitrite evaporates the tube is pushed further down so as to go closer to the paper or wool, and thus a stronger vapour is obtained. When it is desired to give a diffusible stimulant ether may be employed in a similar way, or a quantity of rectified spirit, brandy, or whiskey may be poured into the lower part of the flask and oxygen allowed to bubble through it. The bottle may also be used simply to render the oxygen warm and moist. In this case the bottle is half filled with hot water and placed in a small basin of hot water or surrounded by hot wet flannels. In some cases of bronchitis it may be advisable to add to the hot water friar's balsam, terebene, or other terebinthinate preparations.

BURBERRYS recently had an interesting display of the outfit they have provided for the Canadian Arctic Expedition, which, early in June, will start under the command of Mr. V. Stefansson into the hitherto unexplored regions bounded by Behring Strait and the Pole, the western border of the Arctic archipelago, and the known open sea north of Siberia. The materials were specially woven and proofed.

THE INTERNATIONAL MEDICAL CONGRESS IN LONDON.

AUGUST 6TH TO 20TH, 1913.

THE Seventeenth International Congress of Medicine, which will be held in London next August under the patronage of H.M. the King, will be opened by H.R.H. Prince Arthur of Connaught as the representative of His Majesty at a meeting in the Albert Hall at 11 a.m. on Wednesday, August 6th.

The last meeting of the Congress in London took place in 1881, when Sir James Paget was President. This year the President is Sir Thomas Barlow, and the Treasurers are Sir Dyce Duckworth and Mr. Makins. Sir Alfred Pearce Gould is Chairman of the Executive Committee, Sir Henry Morris Chairman of the Finance Committee, and Sir Lauder Brunton Chairman of the Reception Committee. There is also a Ladies' Committee, of which Lady Duckworth is Chairman.

The Central Office of the Congress will be in the Albert Hall. The sectional meetings will be held in rooms in the University of London, the Imperial College, the Royal School of Science, the School of Art, and the Central Technical College. These bodies have generously placed their buildings, which are all close together in South Kensington, at the disposal of the Congress. The Royal College of Physicians, the Royal Society of Medicine, St. Thomas's Hospital, the Royal Army Medical College at Millbank, and the Royal Dental Hospital are also offering accommodation for sectional meetings. The Students' Union of the Imperial College will serve as the men's club, and the authorities of Alexandra House have kindly lent rooms for a ladies' club.

There are in all twenty-six Sections and Subsections. Their sessions will be held in the morning and in the afternoon. The morning sessions will be devoted to discussions on fixed subjects, which will be introduced by eminent medical men from every part of the world who have been invited for the purpose. The invitations have been very generally accepted, and there seems no doubt that the discussions will be of great interest and importance. The work which the several Sections purpose to do will be noticed in future issues.

Five general addresses have been arranged. These will be delivered by Professor Chauffard (Medicine), Professor Harvey Cushing (Surgery), Professor Ehrlich (Pathology), Mr. W. Bateson (Heredity), and the Right Hon. John Burns, M.P., President of the Local Government Board (Public Health). They will be delivered in the Albert Hall.

It is estimated that about 5,000 medical men and 2,000 ladies will attend the Congress.

The organization of the Congress has been going on for nearly three years. It will give some idea of the magnitude of the task to state that it has taken a complete year to arrange the personnel of the various committees, and another complete year to settle the programme of the discussions in the Sections. The latter was issued on September 30th last. There are several discussions for which two or more Sections are combined. At the present time the reports drawn up by those chosen to introduce the discussions are being received and set up in type. It is hoped that all these reports which will form the basis of the discussions will be printed and bound as a separate volume for each Section before the Congress opens. A second volume for each Section will be published subsequently containing the speeches delivered and the independent papers presented at the Congress itself.

A circular will be issued on April 30th giving information on travelling facilities, both to London and in London, on hotels and boarding houses, on the location of the various sections, and on other points likely to be useful to members. Early in June the final programme of the scientific business will be published, which will include the list of independent papers accepted by the Sections and the names of intending speakers.

The office of the Congress is at present at 13, Hinde Street, W., where information may be obtained by applying to the General Secretary.

Subscriptions to the General Fund of the Congress should be forwarded to the Treasurers of the Seventeenth

International Congress of Medicine at the same address. It should be borne in mind that the membership subscription of £1 only suffices to meet the expenses of producing the *Volume of Transactions* subsequently delivered to each member. The entire cost of organization and conduct of the meeting has therefore to be provided for by private subscriptions to the General Fund.

A list of the subscriptions already received will be published shortly.

THE PARLIAMENTARY COMMITTEE ON PROPRIETARY MEDICINES.

ANALYTICAL EVIDENCE ON BEHALF OF PROPRIETARY PREPARATIONS.

ON April 10th evidence was given by Mr. Ernest John Parry, consulting and analytical chemist, practising in London, who had been retained for the purposes of the inquiry by the Proprietary Articles Section of the London Chamber of Commerce. In the absence of Sir Henry Norman, Mr. H. L. Lawson presided.

The British Pharmacopoeia.

The witness said he proposed to deal with the scientific evidence already given, and, with great respect to the witnesses, to correct some important misstatements of fact. He would also deal specially with *Secret Remedies*, and endeavour to convince the Committee that there were such grave defects, mistakes, and inaccuracies in that work as to cause it to fall utterly short of what it claimed, namely, to disclose what such remedies contained and what they cost. The witness controverted the statement of Dr. Tirard that the *British Pharmacopoeia* was authoritative in the courts of law until it was replaced by a new volume. Mr. Parry said that a divisional court had held that the *Pharmacopoeia* was only a *prima facie* standard, and might be rebutted by expert evidence. The evidence of Dr. Tirard left the very definite impression that the *British Pharmacopoeia* had only introduced official substitutes for proprietary medicines where they contained poisons. The witness took strong exception to this view, and gave a list of about twenty official drugs of the *British Pharmacopoeia*, most of which were free from poisons, and all of which, he said, started life as proprietary and at one time secret medicines, achieved success as such, obtained recognition of their value from the medical profession, and were ultimately included in the *Pharmacopoeia* in exactly the same manner that Dr. Tirard said the substitute for Dr. Collis Browne's chlorodyne had been included. The list included Murray's fluid magnesia, and the witness said this was one of the few proprietary medicines introduced by a medical man. It was run openly as a proprietary medicine by a medical man of high standing—Dr. James Murray, physician to the Lord Lieutenant of Ireland in 1859. The witness produced a newspaper dated September 15th, 1859, in which an advertisement of this remedy appeared over the signature of Dr. Murray.

The Chairman: In those days was there the same regulation with regard to acts of that kind as there is now?

The Witness: I should say not, for there are in this paper two other advertisements of their own proprietary medicines by medical men. Continuing, the witness said that in regard to remedies sold as cures for cancer, consumption, and certain other diseases, and as to remedies dealing with sexual diseases, he was in agreement with Dr. Cox, except that he considered the measures he suggested for dealing with these were not useful and should be replaced by the remedies proposed by the London Chamber of Commerce. The case of the British Medical Association seemed to be built up on the assumption that the ingredients of a large majority of proprietary medicines were relatively inactive. Apart from the cancer, consumption, etc., "cures," he declared this assumption to be erroneous and untrue. The better known proprietary medicines contained highly active useful ingredients. He knew this because, in his capacity as an expert in drugs, some of the principal manufacturers were in continual communication with him, and samples of the various drugs used by them were regularly submitted to him for analysis, in order to know that the highest degree of purity was being obtained.

Criticisms of the Suggestions of the British Medical Association.

The witness urged that publication of the formulae of proprietary medicines would lead to the marketing of numerous imitations. He regarded Dr. Cox's evidence as to the effect upon the sale of advertised medicines of the publication of *Secret Remedies* as an endorsement of this view; the public would still get an easy means of self-medication, and it could not be useful to injure the present proprietor for the sake of the imitator. The omission from the Sale of Food and Drugs Act of the exemption in favour of proprietary remedies, as suggested by the British Medical Association, would not effect the object desired, as, even assuming the label to be a warranty (as in fact it was), and even assuming the label to contain the formula, a prosecution would not lie unless the purchaser in buying the article recited the formula. An offence would be committed, but under the Merchandise Marks Act, of which he thought Dr. Cox had not appreciated the scope.

The witness said that from his knowledge of the medical profession and the wholesale drug trade he disputed Dr. Cox's evidence as to the attitude of doctors generally towards proprietary medicines. He knew that doctors ordered largely secret remedies of which they did not know the composition. One preparation, of which an incorrect analysis was given in *Secret Remedies*, had been asked for by 3,000 medical men since January 1st, 1913, in the form of samples, and 200 doctors had expressed in writing their approval of the remedy. In support of this statement the witness handed in for the private examination of the Committee a selection from the letters referred to.

Sir Philip Magnus: Their approval of the samples would not necessarily imply that the doctors ordered the preparation for their patients.

The Witness: There are many other secret remedies, most of which are in the two volumes issued by the British Medical Association, which from my own knowledge are prescribed regularly by the medical profession. It is quite a common practice for doctors to do so.

Sir Philip Magnus: Are the ingredients unknown to medical men?

The Witness: I am certain the average medical man could not give the slightest idea of what many of them contain.

So that when they prescribe these remedies their treatment is quite empirical?—I do not say that. The doctor gets results, and, therefore, he goes on using the preparation.

The Chairman: His knowledge is practical, not scientific?—Just so.

As to the insertion of advertisements in the BRITISH MEDICAL JOURNAL, the witness expressed the opinion that an announcement regarding a "diabetic whisky," conveying the impression that the amount of sugar in the whisky was reduced to the very least fraction, should not have been accepted for publication, because there was no sugar in whisky, and the quantity could not therefore be reduced.

The Analyses in "Secret Remedies."

As to the evidence of Mr. E. F. Harrison, the witness said he agreed with Mr. Harrison in his general condemnation of the extreme cases of some of the preparations dealt with in *Secret Remedies*, but he did not agree with the suggestion that "any case for new legislation must rest largely upon what was done in the worst cases and what it was possible to do." To take this attitude would be a great injustice to reputable manufacturers. He did not agree with Mr. Harrison that to compel the declaration on the label of all the principal ingredients would automatically kill out flagrant swindles. The proprietors of fraudulent remedies would have no difficulty in concocting formulae containing small quantities of substances whose names would not give any information to the purchaser, but, on the contrary, make the remedy appear to be of a highly important and complicated nature, though possibly quite valueless. Any such requirement would therefore hurt the honest useful remedies, while leaving the fraudulent ones more or less untouched.

As to the differences between Mr. Harrison's formulae and those claimed by the manufacturers, the witness denied that it was the case, as suggested recently in the BRITISH MEDICAL JOURNAL, that these differences were due to recent alterations in the formulae. Once a successful trade was established in any article, the proprietor did not alter the formula except in quite exceptional cases; it did not pay to do so. Differences were to be accounted for by the inherent difficulty of a proper analysis of the majority of proprietary preparations. An enormous number of these preparations were totally incapable of analysis at all; there was no analyst who could do it.

Mr. Glyn-Jones: Would you not rather say, "totally incapable of accurate, complete analysis?"

The Witness: A large number of mixed inorganic preparations, such as medical men's prescriptions, are totally incapable of being analysed, or any formula being arrived at by any known means at all.

The witness proceeded to criticize the books, *Secret Remedies* and *More Secret Remedies*, in detail. He said that Mr. Harrison had probably done his large amount of work with comparatively little error and in a very able way, but as large numbers of preparations could not be accurately analysed chemically it was unfair to publish specific formulae as if they were, in fact, complete and accurate, with merely some general admission in a preface that the formula might not be altogether complete. The editors of these books expressed their knowledge of the possibility of errors, and of the real impossibility of proper analysis in many cases, in such a way that the ordinary reader would believe, and was intended to believe, that the formulae given were correct and true ones, resulting from a chemical analysis. It was admitted that, in general, vegetable preparations could only be identified when they contained an alkaloid or a glucoside, and the statement was made that vegetable extracts containing no such principle were not identifiable, but were only used in pharmacy for their agreeable odour or bitter taste. The witness said that this statement was so hopelessly incorrect that much of the value of the analyses in the book fell to the ground with the inaccuracy of that suggestion. If the statement were true, the *British Pharmacopoeia* might go on the dust-heap, and medical men would have to admit that 90 per cent. of their prescriptions contained nothing save inert substances having either an agreeable odour or a bitter taste. He said with confidence that far more than half the vegetable preparations of the *British Pharmacopoeia*, when mixed, as they usually were, several at a time, in medicines or prescriptions, could not possibly be detected by any known means by any living analyst unless they were present to such a large extent as to be recognized by taste or smell. An enormous number—probably the majority—could not even be recognized by taste or smell if there were present some strongly tasting or smelling ingredient in such quantity as to mask the taste and smell of the other bodies. This applied with considerably greater force to the drugs not in the *British Pharmacopoeia*, but included in the standard works of reference. The witness concluded by giving a number of examples from *Secret Remedies* in which he affirmed that from his own knowledge the analyses were substantially inaccurate and incorrect. He was prepared to supply details, not for publication, with the understanding that they might be handed to the Government analyst for verification, so far as that was possible by analysis.

The cross-examination of the witness was postponed until the next meeting of the Committee.

THE MEDICAL HERBALISTS' ASSOCIATION.

Evidence was next given by Mr. Joseph Watmore, who said he represented the National Association of Medical Herbalists. There were 1,500 medical herbalists and botanists in this country. He claimed that with few exceptions this form of occupation was carried on carefully and honestly. The association for which he appeared desired that medical herbalists should be given the same privilege as pharmacists of being relieved from the stamp duties if they published formulae in trade journals, and did not claim the preparation to be a cure. The witness advocated the establishment of a proprietary medicines office, which should register the formulae of new preparations and take action if the public did not receive articles in accordance with the registered formulae.

THE SALE OF VERONAL AND ALLIED COMPOUNDS.

WHILE the modern development of organic chemistry has furnished the physician with a considerable number of drugs of value, it has also been partly responsible for the putting before the public, without restriction, of many new drugs which experience has subsequently shown to be at least as dangerous as earlier known substances regarded by the law as poisons, and only obtainable under more or less adequate restrictions. Since the list of scheduled poisons to which such restrictions apply can be extended at any time by an Order in Council, it is possible for the law to be kept nearly abreast of knowledge of the properties of new substances; but if the machinery works with much friction, such extensions of the Schedule may be much delayed. The initiative in making additions rests with the Pharmaceutical Society; the Council of that society must pass a resolution setting forth that certain substances ought to be included in Part I or Part II of the Schedule, and when such resolution is sent to the Privy Council the latter authority issues—or does not issue, as it sees fit—the Order making such inclusion part of the law. The present restrictions on the sale of carbolic acid were advocated for years by the Council of the Pharmaceutical Society before its resolutions were acted on by the Privy Council, and resolutions in favour of the scheduling of acetanilide have not yet led to this substance being added.

The most recent Order in Council on the subject of poisons adds veronal, trional, and a number of allied compounds to the Schedule. A resolution in favour of this being done was passed by the Council of the Pharmaceutical Society in March, 1912; the terms of that resolution would have substituted for "sulphonal" in Part II of the Poisons Schedule "sulphonal and its derivatives and the poisonous derivatives of mercaptol," and would also have added, "di-ethyl barbituric acid and other derivatives of barbituric acid and all poisonous ureides and their derivatives"; but the Lords of the Council did not approve. Since then more cases of veronal poisoning have occurred, and one in particular has attracted much public attention; the importance of restricting the sale of this substance being thus again emphasized, the Council of the Pharmaceutical Society passed a new resolution in February of this year; it was of a far less inclusive character, and, in fact, limited to the one substance, di-ethyl barbituric acid, the substance sold as veronal and under other trade names. Again, however, the Lords of the Council found themselves unable to agree to what was proposed; but, as the result of a conference with the officials of the Privy Council and the chief Government chemist, a resolution was passed by the Pharmaceutical Council at its meeting in March, which has since been approved by the Lords of the Council, and on and from April 12th the substances mentioned therein are poisons in the eye of the law and must be treated as such. The resolution was as follows:

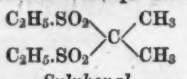
(*a*) That "Sulphonal" be removed from Part II of the Schedule to the Poisons and Pharmacy Act 1908, and that "Sulphonal and its homologues, whether described as trional, tetronal, or by any other trade name, mark, or designation," be substituted therefor.

(*b*) That Diethyl-Barbituric Acid and other alkyl, aryl, or metallic derivatives of Barbituric Acid, whether described as veronal, proponal, medinal, or by any other trade name, mark, or designation; and all poisonous Urethanes and Ureides ought to be deemed poisons within the meaning of the Pharmacy Act 1868, as amended by the Poisons and Pharmacy Act 1908 and ought to be deemed Poisons in the Second Part of the "Schedule of Poisons" to that Act.

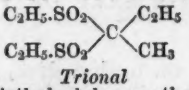
The restrictions applying to poisons in Part II of the Schedule are: (1) They can only be sold by retail or dispensed by a qualified pharmacist; and (2) when sold by retail they must be labelled with the name of the article, the word "poison," and the name and address of the seller.

The regulations as to the keeping of poisons in special containers or away from other drugs also apply.

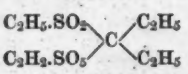
The number of substances thus added to the Schedule is considerable. It may prove to be the case that the first clause will be held to cover not only sulphonal, trional, and tetronal, but also "reversed sulphonal." The relationship of these four compounds is shown by their formulae:



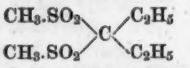
Sulphonal
(Diethylsulphon-dimethyl-methane)



Trional
(Diethylsulphon-methyl-ethyl-methane)



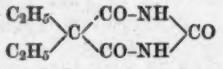
Tetronal
(Diethylsulphon-diethyl-methane)



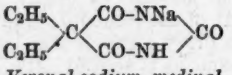
"Reversed sulphonal"
(Dimethylsulphon-diethyl-methane)

Thus the last-named is not strictly a homologue of sulphonal, but a metameride.

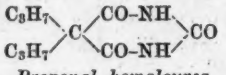
The second clause includes, in the first place, the substances specified by name, diethylbarbituric acid (veronal) and proponal, with medinal (veronal-sodium) and other metallic derivatives, the mutual relationships of which are shown thus:



Veronal, hypnogen, malonurea or malourea
(Diethylbarbituric acid)

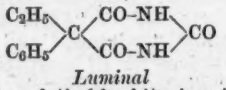


Veronal-sodium, medinal
(Sodium salt of diethyl-barbituric acid)



Proponal, homalourea
(Dipropyl-barbituric acid)

The clause also includes, in the second place, other alkyl, aryl, or metallic derivatives of barbituric acid, such as luminal and luminal-sodium.



Luminal
(Phenylethyl-barbituric acid)

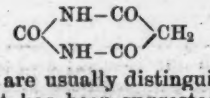
Thirdly, all poisonous urethanes.

Fourthly, all poisonous ureides.

The vagueness apparent here is, no doubt, necessary if there is to be no risk of the amendment of the law being defeated in effect by the introduction of new and perhaps equally dangerous compounds allied to those named; but there are obvious disadvantages in the use of the adjective "poisonous," leaving it to be decided in any given case whether a compound comes under this description or not. The simplest member of the urethane group is urethane itself, which is ethyl carbamate $NH_2CO.OC_2H_5$. This is described in the *British Pharmaceutical Codex* as "a safe drug, and no evil effects are to be anticipated even from 60 to 75 grs." A simple derivative of this is phenyl urethane, $C_6H_5NH.CO.OC_2H_5$, known as euphorine. Others used medicinally are methyl-propyl-carbinol urethane, known by the trade name hedonal, propyl-urethane, ethylidene-urethane, and chloral-urethane. It appears doubtful which of these are included, although it seems probable that the last named would be held to be included. The final group is the one which appears to leave the greatest uncertainty as to what it includes. A ureide is a compound of an acyl (or acidyl) radical with the residue of urea, just as an amide is a compound of an acyl radical with the residue of ammonia. Thus:

NH_3	NH_2-$CO.CH_3$	$NH_2.CO.NH_2$	$NH_2.CO.NH.CO.CH_3$
ammonia	amide of acetic acid	urea	ureide of acetic acid.

When the acyl radical is derived from a dibasic acid, one hydrogen atom of each NH_2 group may be replaced, as in barbituric acid:



Such compounds are usually distinguished as diureides or cyclic ureides; it has been suggested that only cyclic ureides should be regarded as covered by the wording of the resolution, but the justification for this view is not apparent. Adalin (diethyl-bromo-acetyl urea) and bromural (α-brom-isovaleryl-urea) are ureides, though not cyclic, and whether they are now within the Schedule or not depends on whether they are included by the adjective "poisonous"; other familiar ureides which must be judged on the same ground are caffeine and theobromine.

It is to be noted that while it is all *poisonous* urethanes and ureides which are included, *any* alkyl, aryl, or metallic derivative of barbituric acid, even if proved to be non-poisonous, is covered by the wording. Some knowledge of organic chemistry will evidently now be required in deciding what are the requirements of the law in regard to artificial hypnotics, and no doubt pharmacists will show themselves fully conversant with this side of the question. In regard to whether a given substance is or is not covered by the adjective "poisonous," it will probably be thought the wiser course to take the safe line and treat any doubtful article as requiring the same restrictions as sulphonal.

UNIVERSITY OF LONDON.

FINAL REPORT OF THE ROYAL COMMISSION.

[FIRST NOTICE.]

THE final report of the Royal Commission on University Education in London,* appointed in February, 1909, was issued on April 15th. It is signed by all the Commissioners, Viscount Haldane (Chairman), Viscount Milner, Sir R. Romer, Sir R. L. Morant—who, when the Commission was appointed, was Permanent Secretary to the Board of Education—Mr. Laurence Currie, M.A., banker, Sir W. S. M'Cormick, secretary to the Carnegie Institute for the Universities of Scotland, Mr. E. B. Sargant, M.A., to whom was entrusted the task of reorganizing the educational system of South Africa after the war, and Mrs. Creighton, widow of the late Bishop of London. It is a unanimous report, and its influence and authority will be greatly increased by this fortunate circumstance.

Prefixed to the report is an analysis which alone occupies 24 foolscap pages, and the report itself, together with an appendix containing the Commission's brief fourth report (December, 1911) recommending the early acquisition of a site in a central part of London, and an alphabetical index, fills 218 pages more.

It is thus a document formidable in bulk and in the multitude of its facts, opinions, and arguments. It has the outward form and seeming such a document commonly presents, and winds up with a long series of recommendations embodying a scheme for a new University of London to replace that which now exists, but created out of existing elements with financial and other reinforcements. On this point the Commissioners say:

115. *No compromise possible on the essential conditions of university organization.* So strongly, indeed, do we hold the view that the method of working we have described, and the conditions upon which alone such work can be done, are essential to the existence of a real University in London, and that such a University is a national and imperial as well as a merely local need, that it would be better not to interfere at all with the existing constitution than to attempt anything less fundamental. Any reconstruction worth the making must provide the University with at least a nucleus which may safely be trusted to grow and develop. The University will then avoid the gradual lowering of standards which has already brought it twice into a critical situation. We mean, of course, standards of teaching, not standards of examination.

The report, however, is a good deal more than a criticism of present arrangements and recommendations for the future. It includes a treatise on the aims of university education which will be of permanent value. In it general principles are worked out and afterwards applied to London.

The report consists of five parts, the fifth, a summary of recommendations, alone fills nineteen pages.

HISTORICAL.

Part I, which deals with the working of the present organization of the University, begins with an historical

* Cd. 6717. Price 2s.

retrospect, and then discusses the present relations of the internal and external sides of the University, and the consequences of the existing combination in the University of a large number of institutions differently related to it and of different educational standards and aims.

The Essentials of a University.

Part II, which contains 26 pages, discusses the essentials of a university in a great centre of population. It lays down the conditions of the nature and work of such a university, and discusses the essentials of university education. It is pointed out:

First, that students should work in constant association with fellow students of their own and other faculties and in close contact with their teachers, and should pursue their work when young and able to devote their whole time to it.

Secondly, that university work should differ in its nature and aim from that of a secondary school, or a technical or purely professional school. In the secondary school definite tasks are prescribed, knowledge is acquired while the mind is specially receptive, and pupils are mentally and morally trained by the orderly exercise of all their activities; in the technical or professional school theoretical teaching is limited and directed by the application of ascertained facts to practical purposes; in the university knowledge is pursued not only for the sake of information, but always with reference to the attainment of truth.

Thirdly, that there should be close association of undergraduate and post-graduate work. Proposals which tend to their separation are injurious to both. A hard and fast line between the two is disadvantageous to the undergraduate, and diminishes the number who go on to advanced work. The most distinguished teachers must take their part in undergraduate teaching, and their spirit should dominate it all. The main advantage to the student is the personal influence of men of original mind. The main advantage to the teachers is that they select their students for advanced work from a wider range, train them in their own methods, and are stimulated by association with them. Free intercourse with advanced students is inspiring and encouraging to undergraduates.

And finally, that the influence of the university as a whole upon teachers and students, and upon all departments of work within it, is lost if the higher work is separated from the lower.

At the same time, it is considered that special research institutes should not form part of the extra organization, and the opinion is expressed that no true analogy is offered by such institutes in Berlin, Leipzig, Paris, or Brussels for the establishment of research institutes in London under university control. On the other hand, a university press under full university control is held to be an essential function of the university.

Education for evening students, though not essential to the need of a city university, ought to be undertaken by it, and the education offered to its evening students should be as good as to the day students. The cost, though greater than for day instruction, should nevertheless be undertaken.

Technological instruction, which should be included among the functions of a university, ought not to be of a narrow utilitarian kind. The university department of technology, based upon a thorough grounding of pure science, is of the highest value and importance from the practical point of view of industrial progress. It is noted also that advanced instruction of a specialized kind must be provided for occasional students already engaged in a profession or calling.

It is also recommended that the university should be enabled to establish and maintain a special centre for work in conjunction with the Workers' Educational Association; it must, however, first provide satisfactorily for its own undergraduate and graduate students, and for its professoriate.

Degrees and Examinations.

It is pointed out that, though the granting of degrees is one of the chief characteristics of a university, it is not the real end of its existence. A degree should signify that the possessor has received a university education. Examinations are the main tests in English universities and the sole test on the external side, the lapse of time between the examination being the only condition for securing the student's education. The test is thus one of knowledge only, not of education or of the quality of the work. Any examination however conducted will be injurious if based upon a syllabus too wide to be covered in the time allotted to the education of which it is intended to be a test.

General Conditions Requisite.

The report then goes on to consider the conditions necessary for the realization of these ends. The first is said to be the provision of sound general education, the second homogeneity of university classes, the third a university quarter. By this it is meant that constituent colleges and university departments should be grouped as near together as possible; the creation of such a university quarter would lead to economy in administration, to increased co-operation between different departments of study in the interests of new lines of work, to greater intercourse between students and teachers, and probably to a better public understanding of the university and its work. The fourth condition is the establishment of university hostels and societies. The fifth is a university professoriate, that is to say, the university must provide its own teachers, appointing, paying, pensioning, and dismissing them. The sixth condition involves professorial control of teaching and examination, and the seventh financial control, by the university.

Constitution of the New University.

The general outline of the constitution recommended for the University may be stated as follows:

The Court, including the Deans of Faculties and other members to the number altogether of about 200. It would be the supreme governing body and its chief function would be legislative within the provisions of the first or original statutes which would define the constitution and powers of the other governing bodies of the University. The Court would delegate powers to the Senate or to any committee of its own body. The control of the Court for the internal management of the University would be exercised entirely by means of statutes and resolutions and would take effect only by altering or setting in motion the existing machinery for the government of the University.

The Senate would consist of the Chancellor, Vice-Chancellor, Chairman of Convocation, and twelve other persons, appointed—five by the Crown, two by the Court, two by the Academic Council, two by the London County Council, one by the Corporation of the City of London. The Senate would be the executive body, having financial control and power to recommend to the Court the admission of Constituent Colleges and University Departments, the recognition of Schools of the University, and the institution of new degrees, diplomas, and certificates.

The Academic Council would consist of the Vice-Chancellor, the Deans of the Faculties, one teacher representing each group of studies for which no Faculty had been formed, and eight members of the Faculties elected by the Faculties in common session. It would advise the Senate as to the general direction of the Faculties on matters concerning research, teaching, and examination, and generally as to any action having a direct educational bearing.

The Committee for Technology would have control of the annual income of the Imperial College and of the engineering department of University College and King's College. It would report to the Senate on appointments to professorships and readerships in the Faculty, and would receive reports from the Faculty of Technology.

Other Committees of the Senate.—The other committees of the Senate recommended are: (1) A committee to supervise the curricula and examinations of students in schools of the universities and other students not in constituent colleges or university departments; (2) a committee or committees to supervise the extension of university teaching; (3) a committee to supervise school examinations.

Convocation.—The powers of Convocation are saved, but it would include all university professors and readers, and all honorary associate professors and readers, and all persons holding an honorary or *ad eundem* degree.

A Students' Representative Council, consisting of and elected by registered undergraduate and graduate students. It would appoint two representatives to the Court and have right of access to the University authorities by petition.

The Faculties would consist either wholly or in the main of University professors (including honorary and associate professors) of the subjects comprised in the Faculty, of the University readers, and of such other teachers and officers appointed by the University as the Faculty might co-opt. It would have power to determine generally the conditions for the award of degrees, diplomas, and other distinctions within the purview of the Faculty and to determine generally the course of study. It would be responsible for the conduct of examinations in constituent colleges and university departments, and would advise the Senate as to the needs of the Faculty and as to the provision and organization of the teaching within it. The Faculties recommended are arts, science, technology, economics, medicine, laws, and theology.

Professors and Readers would be teachers in constituent colleges or university departments or schools. The University would choose them for their individual excellence from the widest possible field, and would give them such remuneration, including superannuation and conditions of tenure, as would free them from the pressure of material anxiety. It is recommended that in the Faculty of Medicine the minimum salary of a professor should be £1,000, and of a university reader £300. The head of each department of a constituent college would be responsible for its control, including that of its laboratories and libraries.

Examinations.—Students in the department would be examined by the head of such department, and, under his direction, by the other teachers in the department, but at the public examination one or two assessors appointed by the Faculty would be conjoined with him. The several heads of departments and other teachers in a Faculty attached to a constituent college, together with the assessors, would form the examining board for degrees.

Colleges and Departments.—The constituent colleges would be educational institutions either established by the University or strong enough in one or more faculties to comply with the conditions for the incorporation and transfer to the University of the financial and educational control of their work. University departments would be departments dealing with a single subject of study or with a group of studies of less range than a faculty whether established by the University or placed under its financial and educational control. Schools of the University would be public educational institutions or groups of departments in larger educational institutions not under the educational or financial control of the University, but complying with the necessary conditions which include: (1) That the University shall be represented on the governing body; (2) that the principal teachers shall form a board of advice and with power to make suggestions to the governing body on academic matters. In the case of a hospital medical school it is considered that it would be sufficient for the board of teachers to report to the committee in charge of the business of the school and to be represented on that committee. (3) The University must be represented on the appointing committee in the case of teachers not directly appointed by it; in the case of a hospital medical school this provision would apply only to those teachers not on the staff of a hospital. The twelve general medical schools in London, together with the Royal Army Medical College and the London School of Tropical Medicine, should, it is recommended, be recognized as schools of the University until such time as any of them qualify for admission as constituent colleges in the Faculty of Medicine.

The Faculty of Medicine.

In the historical retrospect at the beginning of the report it is pointed out that the movement for the reform of university education in medicine arose from the dissatisfaction felt by the medical teachers in London at the small number of university degrees obtained by their students in proportion to their total number and to the opportunities of clinical teaching. This aspect of the subject is dealt with at considerable length, and the general trend of the conclusions reached may be gathered from the following extracts:

316. *The Grievances of the London Medical Students.* . . . We are convinced that the proper course for us to take is to consider what in this Faculty, as in others, is essential to a real university education, and to endeavour to make recommendations which will result in adequate provision being made in London for this education being open to all who are able to profit by it. The degree will follow in the ordinary course, and the grievance should naturally disappear. So far as entrance to the University is concerned, the average London student has undoubtedly been under a real disadvantage in the past, partly because the present Matriculation examination is not connected with a well-developed system of secondary education, and many of the schools from which medical students come have not prepared their pupils for that examination, while the University has in the past been loth to accept equivalent qualifications, and partly because the Conjoint Board and the General Medical Council accept lower standards of admission to the minimum medical curriculum, and the students do not realize till it is too late that they are excluded from the beginning of their course from taking a university degree. The fact is very significant in this connexion that the students of the London School of Medicine for Women, who until quite recently were not admitted to the examinations of the Conjoint Board, have not found any difficulty in taking the degree of London University, and have been able to do so on the average in a shorter time than the men.

317. *The School examination admitting to the University will ultimately remove the grievance.* It is in our opinion most regrettable that so large a proportion of the medical students in London do not graduate through its University. The whole difficulty resolves itself into one of defective education, and the true solution of it is to institute such a system of school examinations as we have recommended for entrance to the University. Every student qualified by his previous education for university studies will then be admitted as an undergraduate without any need for special preparation, or for a special acquaintance with the university regulations. When a student is once in his course will be systematic and educative. He will not be required to pass tests for which he has not had full opportunity of preparing, and he will fail only if he is unfit or has neglected the opportunities afforded him. If either of these is the case he ought not to succeed.

This chapter of the report occupies altogether forty-three pages and is followed by four more on dental education. The further consideration of the views expressed and recommendations made must be postponed. We can only now indicate that among the general conclusions to which the Commission has arrived is that university medical colleges, each with a general hospital, would be required, but the difficulties in estimating how many such hospitals would be necessary are admitted, although three seems to be contemplated. The Commissioners, however, are clear on the point that the standard of teachers in the clinical subjects of the medical curriculum in these colleges ought not to differ from that of university professors in other subjects, so that it will be necessary to appoint and pay professors of the various branches of clinical medicine and surgery to devote the greater part of their time to teaching and research. The Commission favours the adoption of the Hospital Unit, consisting of a professor with the control of wards; an out-patient department; assistants nominated by the professor with a view to complementing his own knowledge and affording him the special assistance he requires to carry on research in the direction in which he is interested; and, finally, laboratory accommodation in close proximity to the wards, not only for the service of the wards and the examinations and procedures connected with the diagnosis and treatment of the cases, but also for the purposes of research. Each university medical college would consist of three units for the three main clinical subjects—medicine, surgery, and gynaecology—with, if possible, facilities for instruction in special departments, although it is considered that in respect to some of them such instruction should eventually be provided in special clinics outside the general hospital of the medical college.

Finance.

The Commissioners estimate that for professorships and readerships and the maintenance of libraries and laboratories the University will require an additional income of £85,500, with a further sum of £13,500 to permit the reduction they recommend in the fees university students would be required to pay to £15 a year for arts, £20 a year

for science, and £30 a year for technology, making a total additional income of £99,000. The annual income required by a medical college in order to provide for the cost of the three clinical units recommended would be £12,000.

LITERARY NOTES.

IN a thesis for the doctor's degree recently presented to the University of Paris, Dr. Paul R. Mersey discussed the heredity of mental disorders so marked in the Spanish branch of the Hapsburg family. He shows that these disturbances have often taken the special form of a morbid love of death. The most marked instance is that of the mad queen, Juana la Loca, who would seem to have initiated this heredity. In 1506 her husband, Philip the Fair, fell grievously ill. She remained with him throughout his illness, and although she was well advanced in pregnancy no remonstrances availed to make her leave his bedside for a single moment. When he died she "nor wept nor uttered cry," but mute and motionless she answered nothing to those who spoke to her except by a gesture commanding silence. She had her husband's body embalmed, and after the funeral obsequies it was deposited in the church of the Carthusians of Miraflores near Burgos. Some days later she went to that sanctuary in a religious habit and began to pray. All at once she ordered the coffin to be opened and the wrappings to be removed from the body. She threw herself upon it, kissing the hands and the feet, and uttering aloud most tender expressions. The Queen periodically returned to Miraflores, and at each visit she had the temporary tomb opened. Soon she had the body taken out of the tomb and carried to her own room, where she placed it on a bed of state clad in magnificent robes. She was as jealous of her husband when dead as she had been when he was alive. She did not allow her women to go near the bed, and those not belonging to her establishment were not suffered to enter the room. She even declined the ministrations of a midwife, although one of great age had been chosen purposely, and she was delivered of a daughter without any assistance but that of her servants. At last she was persuaded that she ought to deposit her husband's body in the vaults of Granada. She insisted on taking it there herself. After verifying the contents of the coffin for fear of deception, it was placed on a funeral car drawn by four horses. The convoy started on the night of December 20th, 1506, as the Queen declined to travel by day, saying that a widow who had lost the sun of her soul should never again show herself in the light of day. Accordingly, during the whole journey they stopped before the break of day in a church or in a monastery. At each stoppage on the way she insisted on the reopening of the coffin, and the service for the dead was gone through as if Philip had just died. The following year her father, King Ferdinand, who wished her to marry again, wrote to his physician that the Queen kept the body of her husband continually beside her. It is not known exactly how long she continued to do this, but in 1509 we find her insisting that the body should be deposited in a part of the monastery of Santa Clara, where she could see it from the windows of her apartment, and in 1518, when there was a question of moving into another dwelling, the car on which the coffin was carried was repaired, so that in case of need it could be used for its transport.

In A. Abram's valuable book, *English Life and Manners in the Later Middle Ages* (George Routledge and Sons, 1913, p. 117) there is an amusing claim by a medical man for costs incurred by him in connexion with what we should now call a breach of promise case. Although there was usually a regular contract of marriage with settlements and indentures by which those concerned bound themselves by obligations to perform the covenants, the "Early Chancery Proceedings" prove that often the marriages did not take place. Still more often the dowry was not paid. One of the cases preserved amongst these documents gives an idea of the claims sometimes brought against those who broke their promises. Walter Lemster, Doctor of Physic, demanded, on behalf of his daughter-in-law, Lucy Brampton, from Richard Narborough, Doctor of Civil Law, who had broken his promise to marry her, after an engagement of ten years:

For "hir Arayment, gownys," etc. ...	£20	0	0
For the "Arayment" of her servant ...	6	13	4
Expenses in time of sickness caused by his unkindness...	13	13	4
Expenses seeking him in London and other places to speak to him about the matter...	27	16	0
Expenses and charges in the Courts in London, tarrying in London to speak with him, at his special request ...	48	10	0
	£116	12	8

The claim in respect of what the late Mr. Kruger would have called "mental and moral damages" does not seem excessive considering the engagement had lasted ten years. One would like to know whether Dr. Lemster was successful in his suit.

SCIENCE NOTES.

AT the sitting of the Anthropological Section of the Australasian Medical Association for the Advancement of Science in Melbourne, Mr. L. W. S. Buchner read a paper in which he set forth the results of an examination of what are practically the only remains of the Tasmanian aborigines. He said, according to a report published in the *Australasian Medical Gazette*, that there were now only three half-castes known to be alive. Of these, two were males living on Cape Barren Island, the other was a female living on Kangaroo Island. Of the families now remaining on Cape Barren Island, most were the direct descendants of the early seal fishers, military deserters, and escaped convicts, who carried off Tasmanian aboriginal women. In 1830, after the decline of the sealing trade, there were still over 30 white men and forty-one aboriginal women on the island. Nine families, comprising over 150 persons, were represented on the island. The result of the consequent close intermarrying was showing itself in the degenerate children who attended the Government school. The islanders, as a rule, were very listless and indolent and extremely improvident. Mr. Buchner said that an interesting Mendelian problem awaited investigation, especially in one family in which the Tasmanian characteristics, after skipping the second and third generation, have come out in the fourth.

Questions of priority of an observation are always thorny and seldom of engrossing interest save to the claimants. In these notes, in our issue of March 1st, we ascribed to McGowan of Edinburgh the priority of description of a cocco-bacillus which is probably the cause of canine distemper, and stated that Ferry, working in the laboratories of Messrs. Parke, Davis, and Co., in Detroit, independently discovered the same organism. Messrs. Parke, Davis, and Co. have courteously written to say that Ferry's first paper appeared in July, 1910, whilst McGowan's did not appear till 1911. Both statements are perfectly accurate, and the facts are, we believe, as follows: Dr. J. P. McGowan communicated the results of his work to the Pathological Society of Great Britain and Ireland at its meeting in the first week of January, 1910, and as this society includes practically all the pathologists of this country, the reading of a paper at its meetings may be held to be "publication." The first part of McGowan's complete paper did not actually appear in the pages of the *Journal of Pathology and Bacteriology* until January, 1911. The point to be noted is that the description of the organism and experiments was very complete. Dr. Ferry's first paper appearing in the *American Veterinary Review* in July, 1910, was a preliminary report, and did not therefore state any conclusive basis on which the etiological claims could be founded; in fact, we have found no mention of fever being produced on inoculation even in his later papers. There is no reasonable doubt that, in view of later investigations, Ferry first isolated the organism. Owing to its striking morphological similarity to other organisms, thought by their discoverers to be the causal agents of distemper, it is possible that the same bacillus was previously obtained in mixed culture—an explanation which probably applies to the observations of Monckton Copeman. Be that as it may, McGowan and Ferry quite independently discovered this particular organism, and in strict justice the honours should be divided.

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MALINGERING.

TIME was, not so very long ago, when the subject of malingering possessed for civilian practitioners in this country a degree of importance small relatively to that which it had in countries where military conscription was in force. The importance of the subject had already begun to increase before the passage of the various Acts dealing with workmen's compensation. This legislation defined and extended rights already existing under the common law, and has, without doubt, greatly increased the temptation to feign or exaggerate disabilities due to injury or to certain diseases arising out of and in the course of employment. There is already evidence that the Insurance Act has still further increased the practical importance of the subject, and it cannot be doubted that that measure has multiplied enormously the opportunities for malingering, extending them to classes hitherto more or less completely immune from such temptations.

Dr. Byrom Bramwell, in the interesting and valuable address upon malingering delivered recently before the Pathological Society of Manchester, published at page 805 of this issue of the JOURNAL, gives a definition. A malingerer, he says, is one who feigns sickness or who deliberately (knowingly and wilfully) induces or protracts an illness, with the object of avoiding duty, claiming money compensation, exciting sympathy, or for any other reason. The words "knowingly and wilfully" in this definition will be noted. The term "unconscious malingering" sometimes used is, he says, absolutely erroneous and involves a contradiction in terms, since the very essence of malingering is wilful and deliberate (conscious) deceit. Dr. Bramwell affirms that there are instances in which the patient knows that the condition which he attributes to the accident was previously present; that is to say, he is deliberately lying. But in others—as, for example, in cases of early tabes—he may not know this, and then he is not deliberately and wilfully trying to deceive. Further on, almost using Sir John Collie's words, he says that if it pays a patient better to be ill than to be well, or if a patient is lazily inclined and is content to take a holiday on sick pay—it may be half wages—there is no inducement to get well; in fact, there may be an inducement to remain ill—to prolong the illness indefinitely.

We have taken occasion also in this issue to review the recent book on the subject by Sir John Collie, who as Medical Examiner to the London County Council and in other capacities has had a very wide experience. It will be seen that there is an agreement between practitioners north and south of the Tweed as regards the bad influence which excessive legislation has had upon the manliness of the British workman. Dr. Bramwell quotes the statement made at a recent meeting of the Edinburgh Medico-Chirurgical Society by Dr. Dickson of Lochgelly, who has for twenty years had a large colliery practice in the county of Fife, that traumatic neurasthenia is now a common topic of conversation in the villages of Fife, that the *morale* of the Fife miner, which before the passing of the Workmen's Compensation Act was high, has become much deteriorated, and that the duration of illness after accidents has become much prolonged.

The fears frequently expressed by the father of the Insurance Act that its financial stability might be endangered by malingering seem in the way of being fulfilled, at least in some areas and among certain classes of insured persons. Owing to the fact that the proportion of the total number of insured persons who have become insured through approved societies of one sort or another is far larger than was originally expected, the problem is one which concerns these societies far more than the Insurance Committees. The chief means so far taken by approved societies seems to be the requirement that the medical certificate which insured persons must produce in order to obtain sickness benefit shall specify the nature of the disease. To this it appears, from correspondence which has reached us, some members of the profession take serious exception, on the ground that the giving of such a certificate involves a violation of professional secrecy. The answer made to this is that it is the insured person who makes the application for the certificate, and that he must be assumed to be acquainted with the conditions which the society to which he belongs has laid down. This would seem to be the view taken by the State Sickness Insurance Committee, which, at its meeting on March 27th, expressed the opinion that the question is one affecting insured persons rather than the medical profession, and that it is for the insured persons to make representations to their approved societies if any change be considered necessary. At the same time, the Committee recommended that the position of the practitioner should be safeguarded by taking care that any certificate bearing the name of the disease should only be handed to the insured person concerned, or to his or her accredited representative. From information which has since reached the Committee, however, it is doubtful whether this precaution, in Scotland at any rate, would protect the practitioner in some cases against an action for libel. Correspondents have given us instances of recent cases in which the requirement bears very hardly on the insured person—cases in which a perfectly innocent person has suffered from accident or disease producing some condition which he, or more usually she, would much prefer should not be known to any other person than her medical adviser. It seems, however, that the only sound principle is that embodied in the pronouncement of the State Sickness Insurance Committee. The principle has been recognized in the past by the medical profession, which has never hesitated to give evidence in courts of law as to the physical conditions of patients if requested so to do by the patient. The profession has enough problems of its own without unduly burdening itself with difficulties which are not of its making and which, after all, are the primary concern of the insured person.

On the general question of malingering under the Insurance Act it must, we think, be recognized by medical men who have accepted service under it that they have thereby incurred a serious professional responsibility, and that it is their duty to discountenance malingering. At the same time it must be said that in the past many friendly societies, and especially perhaps the trade unions in their

administration of the sickness benefit they granted, have been exceedingly lax. It is a far simpler and easier course for the doctor to go on giving certificates too long than to run the risk of the annoyance to which he may be subjected if he declines to give them a little too soon or even exactly at the right moment. But the difficulties consequent on a strict attitude in regard to certificates under the Insurance Act are not so great as they were to a doctor holding an appointment to a club. In the latter case the withholding of a certificate to a prominent or troublesome member of the club might entail the loss of one or two hundred club members. The same action under the Act could at the worst only entail the loss at the end of the year of the particular patient and perhaps one or two of his immediate friends. The approved societies, therefore, have an obvious duty in this respect. We have already admitted that the medical profession also has a duty, but its discharge should not be rendered more difficult by giving credence to unworthy suspicions such as spring from the allegation, easily made, that the doctor wishes to escape from his liability to give medical attendance.

The suggestion that the difficulty might be met by the appointment of a consulting medical referee by each Insurance Committee appears to be finding favour. It has been commended by the State Sickness Insurance Committee (SUPPLEMENT, April 5th, p. 305), and seems to have been approved at the recent conference of representatives of approved societies in Westminster. It will be necessary to define the duties of this official very carefully; and in Bristol, where a referee has already been appointed, medical practitioners are advised to refer to him all cases in which there is any doubt as to malingering or as to whether the insured person is capable of working without detriment to his health or convalescence. The State Sickness Insurance Committee was of opinion that such referees should in general be appointed by the Commissioners and not by the Insurance Committees. Such a method of appointment was thought to be likely to ensure more security of tenure and better status for the officer, and to tend to discourage the wire-pulling and petty intriguing which are too often apt to occur with regard to local appointments and lead to selection on political, social, or practically any other grounds rather than professional suitability; and Sir John Collie, in his plea for the appointment of medical referees, published at page 812, maintains that they should have the status and emoluments of Government servants and be responsible to the Insurance Commissioners. Whatever the method of appointment, it is most important that the referee should not be engaged in panel practice and that he should possess the confidence of the local profession, not only in his professional capacity but in his tact and judgement. It would seem, therefore, that in making these appointments the Commissioners would do well to ask for nominations from the Local Medical Committees.

That very serious evils have grown up in connexion with the Workmen's Compensation Act is recognized, and nobody has spoken more strongly than Dr. Byrom Bramwell in his address; in fact, he handles the members of two learned professions with equal severity when he tells us that most of us who have had experience in compensation cases will agree that in some cases the lawyers have a good deal to do in fostering claims and preventing settlement. He mentions a bad railway smash in which a few persons were killed, several injured, and many unhurt. One of the passengers who was unhurt, while walking down to his office, was met by a friend, who said, "I was sorry to see you were in that terrible accident; I hope you were not hurt?" The man shook his head, and said, "I don't know; I have not yet seen my lawyer." But it is not only the lawyers that are to blame. "I have known at least one case," Bramwell adds, "in which a medical man made it his business to hunt up persons who had been in a railway accident, and to coach them up in manufacturing false or exaggerated claims."

THE GRAVE VOMITING OF PREGNANCY.

IT is not every case of grave vomiting of pregnancy that calls for the induction of abortion, for it is not every case that is caused by the biochemical changes which are the result of pregnancy. Even if every instance of hyperemesis gravidarum were toxic in its nature, it would not necessarily call for the termination of the pregnancy. There are other ways of dealing with this dangerous complication of gestation than by bringing the gestation to an end, a method of treatment which Fieux[1] characterizes, with reason, as "ultra radical," and speaks of, without exaggeration, as the "cruel necessity of therapeutic abortion." Fieux himself has succeeded in curing four cases of "uncontrollable vomiting" of pregnancy by means of serotherapy. In two instances he injected serum from a woman in the early months of a normal pregnancy; in another instance he used horse serum along with that from a normal pregnant patient, and in the fourth case he employed only horse serum. The explanation of the good result in three of these cases may very easily be ascribed to antibodies developed in the maternal blood serum in response to chorionic antigens; but the equal success when horse serum alone was used is puzzling. Still, the outstanding lesson to be learnt is that there is another way of treating even the toxic cases of hyperemesis; the "ultra-radical" plan of therapeutic abortion is not the only method which promises good success.

But, as has been said, all cases of incoercible vomiting in pregnancy are not toxaemic in their origin. Dr. A. Herrgott[2] of Nancy has recently reported a most instructive instance of the truly reflex variety of that alarming malady. The patient was a primipara who had never had a serious illness in her life, but admitted being of a very nervous temperament. Vomiting came on at the end of the second month of pregnancy, and rapidly became alarming in frequency and severity; and the woman was sent in a very low condition into the Nancy Maternity Hospital to have the induction of abortion performed. Dr. Herrgott made a vaginal examination, and discovered that the pregnant uterus was displaced backwards (retroversion); he replaced it without difficulty, and immediately there was marked improvement in the vomiting. To his disappointment, however, the amelioration of symptoms was only temporary; in fact, four days later the patient was as seriously ill as at first. Before proceeding to more severe measures he examined the patient once more, and found that the uterus was once more displaced, and that now it was retroflexed and almost incarcerated in the pelvis. By putting the woman in the genu-pectoral position he was able once more to replace the organ, but now he fixed it in its proper

[1] Fieux, G., *Ann. de gynéc. et d'obstét.*, 2 s., vol. ix, p. 718, December, 1912.
[2] Herrgott, A., *Ann. de gynéc. et d'obstét.*, 2 s., vol. x, pp. 65-69, February, 1913.

situation by means of a pessary. Nearly immediate improvement followed, and some three weeks later the patient was able to leave hospital quite well, her pregnancy progressing normally.

Several lessons are to be learnt from such a case as this. In the first place, in every case of vomiting in pregnancy, even if it be of the gravest type, the pelvis should be explored and the position of the uterus ascertained; if it be abnormal it should at once be corrected. In the second place, the obstetrician should satisfy himself that the replacement has been permanent, and should even fix the womb in its proper place by means of a pessary if there seem to be any risk of displacement recurring. But there is a third lesson which does not lie on the surface, and yet is of great importance. It is this. Even when there is a uterine displacement there may also be a toxic state; the retroversion or retroflexion may not be the cause—may not, at any rate, be the sole cause of the vomiting. Consequently, if the replacement of the womb be not at once followed by marked improvement, other means—for example, the induction of abortion—should be instituted, and these without delay. Time enough must be allowed if this "therapeutic of despair," as Herrgott calls it, is to succeed. If we do not do this, he says, we run the risk of being too late.

There still remains a difficulty in some instances of distinguishing between a hyperemesis which is purely nervous and one which is toxaemic in origin. Here Professor Whitridge Williams[8] comes to our aid. Believing that there are three types of excessive vomiting in pregnancy, that the neurotic is the most and the reflex the least frequent type, while the toxaemic is the most serious, Dr. Williams thinks that it is very necessary to separate the neurotic from the toxaemic as soon as possible. This can to a certain extent be done by ascertaining the ammonia coefficient of the urine. "I believe," he says, "that for clinical purposes we can consider a given case of vomiting as toxaemic in origin whenever a seriously ill patient, presenting a high ammonia coefficient (20 per cent. or more), fails to improve after a few days' complete rest in bed, combined with suggestive treatment, energetic rectal feeding, and the administration of large quantities of salt solution per rectum and underneath the skin." Those who have followed Professor Williams's researches on this subject will take note that the high ammonia coefficient test is not now regarded by him as so certain a sign of the toxaemic nature of the case as he at one time thought, yet it has a high value. Still, the great lesson to be learnt regarding hyperemesis gravidarum at the present time is that whether it be reflex, neurotic, or toxaemic in nature, the induction of abortion is not the only effective treatment available.

THE ORGANIZATION OF THE PROFESSION.

WE make no excuse for returning to this perennial question, for that it is the question of all others with the profession at the present time is evidenced not only by our correspondence columns but by the recent attempts, some of which have actually materialized, to form new organizations. These attempts have all grown out of the battle in which the profession has been engaged with the Government over the National Insurance Act, combined with dissatisfaction on various grounds with the constitution and policy of the British Medical Association. They all of them seem to be founded on an imperfect knowledge of the evolution of the Association and of the needs and traditions—prejudices, if the term be preferred—of the profession, and seem therefore to demand close and persistent examination.

In the Nineties there was a strong recrudescence of a desire for medical reform and organization, stimulated no doubt by the example and the increasing demands of organized labour. It took the form of the establishment of a number of local medico-political societies, many of which in their day and generation, and so far as their limited opportunities went, did good work. They all failed when it came to dealing with the man who came from outside, and the setting up of any national organization and co-ordinating machinery was beyond their purview. But the demand for such wider organization steadily grew, and about 1900 it came to be a question either of the setting up of a union of these local societies or of the utilization and development of the British Medical Association, and the latter was the plan adopted at the famous Manchester Conference in 1900. As a direct result of that conference the Association was reorganized; the system of Branches having proved unwieldy, partly owing to the steady growth in the membership of the Association, smaller units of area were taken, and each such area or Division was empowered to select one or more Representatives to the Representative Body, which is the supreme governing body of the Association. The first Representative Meeting was accordingly held at Swansea in 1903.

Ever since that time the constitution of the Association has been in the melting-pot, and it is still there. One change necessitated another, and one step along the path of democratic organization opened the way to still further developments, until the Association is probably in conception, and by relatively minor changes could be made in practice, the most democratic organization of its kind in the world. Indeed, the charge most frequently brought against it of late is that it is too democratic, and that what the profession needs is more central guidance and a firmer hand. This is, of course, a matter for the members of the Association, though it must be pointed out that any general desire felt for a benevolent (or otherwise) autocracy has never been ostentatiously displayed, and any exhibition of a tendency on the part of any one to resort to that form of government would, we suspect, be strongly resented even by those who now, in an academic manner, trifle with the idea. But the Association has gradually become, beyond all question, the one representative organization of the British medical profession. That is a position not easily won and certainly not to be lightly thrown away. It is no more perfect than any other human institution. It is fettered by many legal restrictions which no expenditure of money, hard work, ingenuity, or perseverance has been able to overcome. Its best laid schemes occasionally break down, just, by the way, as trade unions which deal with the same material also frequently fail, because the material with which they both work and on which they both depend is that very imperfect thing human nature. Yet what impartial observer, taking a survey of the organization and position of the profession over the past twenty years, can fail to observe an enormous improvement? A chief symptom of this is the way in which the Association has been able to attach to itself the

[8] Williams, J. W., *Trans. Glasgow Obstet. and Gynaec. Soc.*, ix, pp. 91-117, 1913.

services of a very large number of active and devoted honorary workers who have made the Branches and Divisions of the Association a power to be reckoned with in every part of the empire.

To every reasoned demand for an improvement in its constitution or an extension of its powers and services the Association must always lend a willing ear. But when we find men, dissatisfied, not unnaturally, with the failures of the Association, seeking to encourage the setting up of separate societies to carry out work which they believe the Association either does badly or cannot do at all, we must enter our emphatic protest, not so much on behalf of the Association, for it is quite able to take care of itself, but on behalf of the interests of the profession at large. We distrust these "short cuts." They often prove to lead nowhere. We believe that the salvation of the profession lies in one organization, which shall steadily move to the fulfilment of the ideal of including in its ranks every member of the British profession. Already the Association contains two-thirds of the profession in this country, and can count on a large number of members wherever the British flag flies. The evolution of the ideal Association may be a slow progress, its course may be interrupted by bunkers, even by landslides, but it is not to be hastened by setting up one or a number of outside societies whose avowed object it is to occupy the whole or a part of the territory the Association has marked out for its own, namely, "the promotion of the medical and allied sciences, and the maintenance of the honour and interests of the medical profession."

We are told that these organizations are not rivals of the Association but supplementary to it. We do not question the good intentions of the promoters of these schemes. Some of them have well proved their desire and ability to further the welfare of the profession. But we believe they are mistaken. Those who have had most experience of local organization know too well the difficulties of getting practitioners to join any association formed for their welfare, and these difficulties will not be lessened by the introduction of several rival organizations with the same avowed objects if with different methods. The only possible excuses for the introduction of these rival societies would be either unreasoning complacency on the part of the Association—an assumption that its organization was improvement-proof—or a confession that the resources of statesmanship were exhausted, and that the constitution of the Association could not be modified to meet the new needs and aspirations of the profession. But there is no such attitude, no such confession of powerlessness. The Council is at this time through various committees giving earnest attention to the problems of the profession, and a way will undoubtedly be found. It would ill become a scientific profession to allow a passing mood of not incomprehensible pessimism and irritation to be the means of rushing it into premature adoption of methods—for example, registration under the Trade Union Acts—which have never yet been fully discussed by the profession, and which are repudiated in the strongest way by a large and important section of it. The hope of the profession in the future lies in the development of one strong organization—the British Medical Association. Its methods must be effective and well thought out, and they must not be such as will alienate any considerable section of the profession, for that would defeat the main object of such an organization, which is that the Association must stand for the profession and for every member of it—the panel doctor and the non-panel doctor, the practitioner whose income is chiefly derived from contract practice and the man whose circumstances are such that he need never touch that kind of work, the country practitioner and the city consultant. If the Association falls short of these ideals the responsibility will lie to a great extent at the doors of those earnest but misguided persons who fail to realize that "to conquer" we must not "divide"—ourselves.

EDUCATION AND MEDICAL EDUCATION.

THE hints dropped a little time ago by Lord Haldane and other members of the Government indicating that it was proposed to give particular attention in the near future to the improvement of the national educational system and the removal of some of its defects have been given body and substance by some recent events. When the vote for the Board of Education came on in the House of Commons last week a very business-like discussion arose, in the course of which the President, Mr. Pease, gave an account of the principles actuating his department and a sketch of some of the reforms it is proposed immediately to introduce. The attention given by the Board to the medical inspection of children, to physical training, to open-air methods of instruction, and Mr. Pease's remarks in respect of nursery schools, would appear to indicate that further developments in these directions may be looked for in connexion with the forthcoming proposals of the Government. The first grant in aid of medical treatment was made last year and amounted to £60,000; of this, £50,374 has been spent. During the current year the amount available for grant is to be increased to £80,000, and it is understood that next year the amount is to be increased to £100,000. It may be noted also that the amount of the grant paid to the London County Council on account of the treatment of school children in London was £13,683. It is understood that the financial provision to be made to enable local educational authorities to establish and maintain schools under the Defective and Epileptic Children Act—which it is proposed to make compulsory this year—are to be in addition to the grants made for ordinary medical treatment. Another recent event at the opposite pole of the education system is the publication of the final report of the Royal Commission on University Education in London. The report was only published on Tuesday, and it is not yet possible to form an opinion on its many wide-reaching and complex proposals, but it can be seen that it is a blend of idealism and hard-headedness. There is idealism in its attempt to devise for London a university worthy of it, and hard-headedness in the careful counting of the cost, which, at a rough estimate, is put at an additional annual income of £99,000. We can see no source from which anything like this sum is likely to flow save the State, and we imagine there is no one less likely to dispute this than Lord Haldane, the Chairman of the Commission.

INSURANCE DIFFICULTIES AND THE WAY OUT.

AT the risk of being accused of "damnable iteration" we would once more invite the Joint Committee of Insurance Commissioners to begin without further delay to use the powers of co-ordination with which they were endowed by the Insurance Act. The British people have an admirable faculty of governing themselves, and making good the mistakes of party politicians in the legislature. But it is the duty of a central authority, which ought to be above and outside of party, to watch very carefully over the first movements of a complicated piece of machinery, and constantly to stand by until the engine has found itself, always ready to ease her, and lubricate the unaccustomed valves and pistons and pinions. The Joint Committee and the English Commissioners may take

the lead given them by the Scottish Commissioners in the wise, straightforward, plainly-worded conciliatory memorandum recently issued to the medical profession in Scotland. It is, perhaps, not very difficult to divine whose mind guided the pen that wrote this temperate and reasoned explanation and appeal. The better position in Scotland shows what wise counsels and a sympathetic spirit may do. Such counsels and such a spirit would be very helpful at present in England. In Wales also—but of Wales we prefer not at present to write—Wales, where the engineers seem to be letting the machine run wild, in the hope that by pressing a full head of steam the engine may be made to work somehow at whatever cost to its ultimate efficiency. In Ireland the proceedings of the Insurance Commissioners have that touch of the wicked baron of comic opera which makes the politics of that enchanted island so bewilderingly entertaining to the dull Englishman. The position is stated with some fullness by our Dublin correspondent (SUPPLEMENT, p. 339). "The quarrel is a very pretty quarrel as it stands; we should only spoil it by trying to explain it." At least, that is the impression derived from a study of the efforts in this direction of the Irish Insurance Commissioners themselves. They seem, as Mrs. Malaprop would say, "as headstrong as an allegory on the banks of the Nile," and to have brought about a position as muddled as that good lady herself.

MEDICAL AID ASSOCIATIONS.

REFERENCE was made in the issue of March 29th, p. 679, to the position created at Swansea by the proposed establishment of medical aid associations in the town. As was then stated, the Division had appealed to the honorary medical staff of the Swansea Hospital, and the resolution which the staff had in consequence adopted was then fully set out. It was presented to the Board of Management in the forcible speech made by Dr. Lancaster, senior physician at the hospital, and the discussion at that meeting was brought to an end by an offer of the Mayor to convene a conference between six medical men, six trade unionists, and six representatives of friendly societies. This conference was held, but no solution of the difficulty was reached, and the conference was adjourned. Negotiations have since been broken off by mutual consent, and the adjourned meeting of the conference will not be held. We are informed that medical aid associations have been formed at Gorseinon, Neath, and Briton Ferry, and whole-time medical officers appointed. At a meeting of the honorary staff of the Swansea Hospital, held on April 14th, the course which the members should adopt to carry out the resolution declining to allow themselves to be used as a tool to crush their brethren outside was discussed. The staff of the Swansea Hospital will, we believe, have the sympathy of the staffs of all other voluntary hospitals throughout the country, who in similar circumstances would, we have no doubt, take the same course. The staff of the Swansea Hospital has resolved that in no circumstances will it meet in consultation or have any professional dealings with any medical men holding office under a society or association employing medical men under conditions not approved by the medical profession, and will decline, except in cases of gravest emergency, to treat in hospital any member of such society or association.

THE FUTURE OF THE WELSH MEDICAL SCHOOL.

ONE result of the commercial prosperity of South Wales has been an enormous increase of population and it was natural, therefore, when the aspirations of Wales for the organization of a system of university education for the principality were realized, that it should have been decided by consent that the medical school should have its home in South Wales and should be organized as a part of the University College of South Wales and Monmouthshire. An essential part of a medical school is a large clinical hospital and that Cardiff already possessed. There is now a very great opportunity of putting the system of clinical teaching on a sound basis consonant with the requirements of modern medicine and the highest ideals of university education. The school is still young and, on the clinical side especially, undeveloped. It is important that it should be put in the way of growing into a strong well-balanced body worthy of the national aspirations of Welshmen. Very opportune, therefore, is the publication of the final report of the Royal Commission on University Education in London, which discusses the general principles on which clinical teaching and investigation in the three chief departments—medicine, surgery, and gynaecology—should be organized. The conclusions expressed have been reached by the Commissioners, themselves all educational experts, after hearing the evidence of experts acquainted with university methods, not only in England and Scotland, but in other countries of Europe and in America. The particular application of the general principles to London, where, owing to the existence of many medical schools, the conditions are peculiarly difficult, is not now in question, but we venture to commend to those on whom the great responsibility of watching over the future of the Welsh medical school is committed the perusal of those passages of the report of Lord Haldane's Commission which deal with the later stages of medical education, those in which the student is brought into actual contact with disease and with sick and injured persons. The Commissioners have no hesitation in advising that an essential part of a university is a university medical college with a large general hospital in which clinical instruction is given. They recommend the adoption of the "unit system," the minimum number of units being three—for medicine, surgery, and gynaecology respectively. Each unit would have at its head a professor with the control of wards, an out-patient department, assistants to help in the general work of the department, and laboratory accommodation in proximity to the wards, where examinations and procedures connected with the diagnosis and treatment of the cases may be carried out and researches into the unsolved problems of disease prosecuted. Whether this particular system be adopted or not at Cardiff, it is clear that the responsibility of the newly appointed Election Committee is very great, and that what is now done will have its effect for a generation on the growth and development of the Welsh Medical School and the University of Wales. Those responsible, we have reason to believe, are anxious to make the best appointments possible, and will be guided, we make no doubt, solely by consideration of the merits and capabilities of the candidates as physicians and teachers.

CASANOVA'S IMPRESSIONS OF HALLER.

CASANOVA is the least edifying of authors. Of all men who have written so-called confessions, he is probably the frankest, as he is certainly the most shameless. Whoso looketh into his *Mémoires* let him bathe himself in some moral antiseptic and be unclean until the even of the seventh day. We should not think of mentioning him here but for an interesting account he gives of Albrecht von Haller, anatomist, physiologist, physician, botanist, and poet (1708–1777). Haller must have struck even the tainted mind of the Italian swindler and debauchee as hardly any one else did whom he came across in his constant wanderings from one country to another at the orders of the police. He met Haller at Lausanne, apparently in 1760, and describes him as a man gigantic in body as well as in mind. How Haller came to receive such a blackguard is not very clear,

but Casanova's impressions of him are so little like what one would expect from such a witness that it may be worth while to reproduce them. He says: "This learned man opened up to me all the treasures of his science, answering all my questions with precision and particularly with a rare modesty which seemed to me almost excessive, inasmuch as while he explained to me the most abstruse things, he did this with the air of a student seeking for instruction. On the other hand, when he put scientific questions to me, it was with such delicate art that, if I may say so, he forced me to find the exact answer." Haller, he says, called Morgagni his master, and showed Casanova a number of letters from Morgagni and Pontedera, the botanist; with regard to the latter, he complained that his letters were almost undecipherable and of very obscure Latinity. On the question of Latin as the international language of science, Haller's views are particularly interesting in these days of artificial tongues. Casanova was shown a letter from an academician of Berlin, who said that since the King of Prussia had read Haller's letter he had abandoned the idea of suppressing the Latin tongue. Haller had written to Frederick the Great that a sovereign who should succeed in the unhappy endeavour to proscribe from the republic of letters the language of Cicero and of Virgil, would raise an eternal monument to his own ignorance. If men of letters, he said, were to have a common language for exchanging their ideas, the most suitable among dead tongues was certainly Latin, as Greek and Arabic could not be adapted like it to the needs of modern peoples. Haller took an active part in politics and rendered great service to his country. It is amusing to find Casanova approving of Haller's morals; from a man who lived steeped to the lips in almost every form of sensual depravity, this testimony, had it been required, would have been valuable. Casanova quotes Haller as expressing the excellent sentiment that the only good way of giving precepts is to show them in operation by examples, and says that Haller, being a good citizen, was also an excellent father of a family, "for what surer means of proving his love for his country was there than to give it in his children capable and virtuous subjects, a thing which can only result from good education?" His wife, who was his second helpmate, was still young, and bore on her handsome face the impression of benevolence and goodness. Casanova proceeds: "He had a charming daughter of about eighteen, of modest appearance, who only opened her mouth at table to speak sometimes in a low voice to a young man who sat beside her. After dinner, finding myself alone with M. Haller, I asked him who the young man was. He said it was his daughter's tutor." To Casanova's remark that such a tutor and so pretty a pupil might easily become two lovers, Haller answered, "Please God it may be so!" Casanova says this answer made him feel how uncalled for his reflection had been. To cover his confusion—this is almost the only instance in which he acknowledges such a feeling—he took up an octavo volume of Haller's works, which was lying near. In it he found the sentence: *Utrum memoria post mortem dubito.* This moved him to say that it appeared from these words that Haller did not believe that memory is an essential part of the soul. Haller put him off with an evasive answer. Casanova asked Haller if Voltaire often went to see him. His reply was conveyed in the following apt quotation:

> Vetabo qui Cereris sacrum
> Vulgarit arcanum sub iisdem
> Sit trabibus.

Haller spoke much of Boerhaave, whose favourite pupil he had been; he was, he said, a born doctor, and when a boy cured himself of an obstinate ulcer, which had resisted the treatment of the best physicians, and which threatened his life. The reader may be interested to know that the cure was wrought by frequent rubbing with salt mingled with his own urine! Casanova stayed with Haller three days and discussed with him all manner of subjects, except religion, on which he could not induce the great man to say anything. Although attempts have recently been made to establish the accuracy of Casanova's narrative, it requires no great critical acumen to recognize from his own statements that he was a most unscrupulous liar. It is curious that a man of such austere character as Haller should have received such a notorious scoundrel as a guest and spoken freely to him. But there is nothing in Casanova's account of their intercourse which justifies doubt as to this particular story. He speaks in the highest terms of Haller, and seems, indeed, to have been overawed by the simple grandeur of the man's character—one of the most remarkable testimonies of vice to virtue in human history.

BOVINE AND HUMAN TUBERCULOSIS.

AT a meeting of the Berliner medizinische Gesellschaft held shortly before Easter, Professor Orth, formerly a pupil of Virchow's and now his successor, opened a discussion on the etiology of tuberculosis in man. His views, not only in virtue of his position as a pathologist, but by reason of his being chairman of the society, had been eagerly awaited, and were listened to with the greatest interest by the members present. The address was on the importance of the bacillus of bovine tubercle in the production of tuberculosis in man, and in it he strongly emphasized his conviction that, although bovine tuberculosis does not commonly infect the adult, its power to produce tuberculosis in children and infants cannot be denied, and that in consequence a campaign of extermination of the disease in cattle must be our aim in the future. He thus departed from the thesis of Koch's famous pronouncement in London (1901), and maintained that not less than 10 per cent. of all fatal cases of infantile tuberculosis originate from a bovine source, while, according to the estimates of Koller and Wassermann, fully 40 per cent. of cervical gland tubercle and 49 per cent. of intra-abdominal cases are directly due to infected milk. Bendix states that in Germany alone 2,700 bottle-fed infants perish annually from tuberculosis, so that the term "race" disease would hardly be exaggerating the present position. The question of the convertibility of the one bacillus into the other was decided, he claimed, in the positive sense by von Eber, who in 1912, at a meeting of the Royal Institute of Public Health held in Berlin, announced that he had been able by one or more passages through cattle to produce from adults (36 per cent.) and children (53 per cent.) a virulent bovine bacillus. Professor Orth reminded his hearers that in 1906 he had experimentally shown that a primary local infection with inoculated bacilli could create a heightened, latent susceptibility to future infections, and that under such circumstances pulmonary phthisis was the most usual sequel. That a bovine infection contracted in infancy might play a similar part in the development of the disease in adult man was no unreasonable speculation. Professor Orth expressed the general trend and conclusion of his address in the words, "war against the human bacilli, but war also against the bovine." His views were criticized by Weber, a member of the Imperial Health Commission, which has only recently abandoned Koch's beliefs for views more nearly akin to those of Orth. Weber stated that *post-mortem* reports and experimental investigations had shown no recognizable parallelism in the incidence of the disease in man and cattle, nor were there any marked differences in the statistics of countries in which cow's milk was not the staple diet of bottle-fed infants and children. Of considerable importance to his argument was the fact that of 280 children who had demonstrably drunk the milk of tuberculous cows, only two, and both of these cases in

which the cervical glands were involved, had developed the disease subsequently. Moreover, seven years later, during which time they had been under the direct observation of the Board of Hygiene, not one of the 280 had died of tuberculosis.

PHTHISIS IN THE QUARRIES OF DERBYSHIRE.

THE fact has long been known that certain forms of so-called miners' phthisis are more prevalent and more fatal than others. The statistics presented by Dr. Peacock in 1860 are as eloquent at the present time as they were fifty years ago, but it is well that the question should be raised again, and no more interesting or instructive account could be given than has recently been presented by its medical officer, Dr. Sidney Barwise, to the Derbyshire County Council.[1] Within that county are well-defined areas in which three different forms of quarrying are carried on, and statistics of each of these areas are available for analysis with respect to the death-rate from pulmonary consumption. There is also a considerable agricultural area for comparison. Investigation of these statistics shows at once that the death-rate varies very strikingly in some of these areas. Comparison with a geological map indicates very clearly that it is in those districts where millstone grit is quarried and worked that the highest percentage of mortality appears. This stone contains 96 per cent. of silica, and is capable of extremely fine division into dust that may hang in the air like tobacco smoke. Unlike finely divided carbonate of lime, this silica dust is not soluble, and when inhaled into the lungs can only be removed in sputum. In all probability it is only so removed to a very small extent, most of the inhaled particles becoming imbedded in the mucous membrane of the larger tubes, sooner or later causing bronchial irritation and abraded surfaces which may form points of entry for tubercle bacilli. The statistical evidence goes to prove how frequently this course of events must ensue. In one district, where men live under similar home conditions, but with different occupations, the death-rate amongst the millstone grit workers is ten times as great as that prevailing amongst workers in limestone. It is twenty times greater than in the case of the agricultural dwellers in the same area, and seventeen times greater than in the case of workers in other occupations. The condition known as "grinders' rot," prevalent amongst metal grinders in large towns, is no doubt due essentially to the particles of gritstone from the wheel rather than from the metal which is being ground upon it. Dr. Barwise's report has a further interest in respect of the association of pulmonary tuberculosis with lime working and coal mining respectively. Notwithstanding the possible solution of lime particles within the living body, the death-rate amongst lime-quarrymen is higher than amongst coalworkers, who in their turn would seem to be no more liable to tuberculous infection than are the agricultural members of the same community. The excessively high rate amongst the gritstone workers is deserving of careful consideration and many suggestions for its amelioration are made in the report, but local customs and long-established methods are hard to overcome, and only by the steady progress of education is any material change likely to be effected. It is well, however, that all who have to run the risk of inhaling the fine dust of the gritstone should know of the undeniable danger that attends it.

[1] Report on the Prevalence of Phthisis among Quarry Workers and Miners. By Sidney Barwise, M.D., D.P.H., County Medical Officer, Derbyshire County Council. February, 1913.

SPA.

SPA was one of the most famous watering places in Europe, and so great was its renown that in England the name came to be synonymous with watering place. Besides attracting visitors from every part of Europe it did a considerable export trade; quite early in the seventeenth century from 30,000 to 40,000 bottles of the waters were sent out every year. Throughout the eighteenth century the sale was well over 100,000 bottles; in 1842 it was 150,000. This source of revenue has been allowed to decline, and only in recent years has Spa begun to regain its former prosperity as a watering place. In *Paris Médical* of April 5th Dr. R. Wybauw gives an account of Spa in old days. It was described as *Spa Vicus Amoenissimus et Saluberrimus* in an illustration of the town in Matthaeus Merian's *Topographic Westphalica*, published in 1842. Till 1792 the prince-bishopric of Liége was a small independent state. The success of Spa as a watering place was probably due to the fact that, while not far from the great European ways of communication, the little town in the Ardennes combined with the advantages of its waters that of offering a haven of tranquillity and comparative safety in the middle of the wars which had so frequently raged around it in previous centuries. The reputation of Spa seems to have arisen suddenly in the fifteenth century. It is mentioned by the chroniclers when describing the laying waste of the country by the soldiers of Charles le Téméraire. Less than a hundred years later, in 1559, Lymborh, a doctor practising at Spa, published a book on it in four languages—Latin, French, Italian, and Spanish. The town became more and more fashionable, and of all the watering places of French-speaking countries none was so universally celebrated. The visit of Peter the Great in 1717 put the pinnacle on its fame. Illustrious persons pressed around the chief spring (Pouhon), among them being Duke Cosmo de' Medici III, Queen Christina of Sweden, Gustavus III of Sweden, and Joseph II, Emperor of Austria, besides innumerable notable persons from most parts of Europe. During the four months of summer Spa was truly cosmopolitan. Such importance was attached to the waters that during the wars in the Low Countries princes and generals gave special protection to Spa to save it from the excesses of the soldiery. Among them were Marlborough and King Louis XV, and the Allies in 1814. Old medical books about Spa are numerous, but the indications given by them for the use of the waters, which are cold, ferruginous and rich in carbonic acid gas, were very vague. Spa had excellent physicians, such as Lymborh in the sixteenth, de Heers in the seventeenth, de Limbourg in the eighteenth century. In those days the waters were prescribed internally only, and in a purely empirical way; patients of all kinds were treated, from those suffering from "obstructions" to those with chronic inflammatory diseases and others afflicted with ailments dependent on "the acrimony of the humours." In reading the medical observations it can be seen that the most favourable cases were such as are still treated by the internal use of the waters—anaemia, neurasthenia, and so on. Many persons were sent to Spa for gravel and urinary diseases on account of the diuretic qualities of the waters, which were then more manifest as much larger quantities were given. Patients with venereal diseases and dropsy also went to Spa. External treatment by the gas baths dates only from the fifteenth century at Spa, and it was only at the end of the nineteenth that it was applied to circulatory affections. The patients were supposed to lead the simple life. The water was drunk in the morning fasting, sometimes also in the afternoon. Each patient carried a little ivory dial with a needle, which he moved on one division after every glass he drank. In the sixteenth century much attention was paid to diet, and recent researches on the nutritive exchanges have established a regimen similar to that laid down by Bruhezen in the sixteenth century. Spa was a lively place; the fashionable people who frequented it organized ballets, festivals, serenades, and picnics. Before the establishment in 1768 of an assembly room where games of chance, especially faro and trente et un, could be played, the garden of the Capuchins was

the principal place of meeting in the afternoon. The good fathers allowed the use of it to the nobility and gentry in exchange for a small offering. It was in the eighteenth century that gaming acquired a great importance at Spa. With the object of avoiding the multiplication of low gambling places the Prince Bishop gave the monopoly of play to one company, which naturally caused a great deal of quarrelling. The glory of Spa was destroyed by the wars of the Revolution in 1789, and those of the Empire. Its vogue, however, revived under the government of the Dutch, and at a ball on July 18th, 1821, three kings and sixteen princes were present. Soon, however, gaming came more and more to the fore, while the watering-place receded into the background. The town remained fashionable till the suppression of the gaming tables in 1873. For some years Spa has again been becoming an important health resort.

MR. C. S. TOMES, F.R.S., has been reappointed by the King a member of the General Medical Council for five years from May 20th, 1913. Mr. Tomes is the senior Treasurer of the Council.

MR. CLAUD SCHUSTER, secretary and legal adviser to the National Health Insurance Commission (England), has been appointed a legal member of the Commission and of the National Insurance Joint Committee. He will be succeeded in the office of secretary to the Insurance Commission (England) by Mr. John Anderson. The appointments will take effect on May 13th.

AT the parish church of St. Paul, Deptford, last Sunday, the rector, the Rev. R. P. Roseveare, unveiled a memorial to John Harrison, founder of the London Hospital. The memorial, which has been provided at the personal expense of the House Committee, is a marble tablet bearing the following inscription: "In Memory of John Harrison, Founder and First Surgeon of the London Hospital, who died in 1753 and was buried in this Churchyard. His body lies here. His work continues at the Hospital."

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Health of Children—Medical Treatment and Inspection.

IN connexion with the vote for the Board of Education, an interesting debate occurred in the House of Commons on Thursday, April 10th.

INFANTS.

Nursery Schools.

The President of the Board of Education, after explaining the diminution of the number of the children under the age of 5 which were now in attendance in public elementary schools as compared with 1903, said: I am also satisfied, from the inquiries I have made, that experience is disclosing the fact that the education which was given in our infant departments in the past has not really been to the best interests of the small children who have attended. That is being more and more realized by the various local education authorities in the country. In 1908 one of my predecessors asked a Consultative Committee to report upon this question, and they reported that if a mother does her duty, if she takes care of her children, if she knows the best way in which to use her narrow means, if she keeps her home clean, if there is a suitable play place for the children, and if the homes are well ventilated and kept decent, there is no better place for these little dots between 3 and 5 than under their own mother's care; but that if, on the contrary, the conditions are not satisfactory at home—these children should not be sent to a school where there exists adaptation of discipline and tuition suitable to older children, and should not be subjected to mental pressure or physical discipline—they should be sent to what they call nursery schools, places which should be kept warm, well ventilated, where there would be plenty of freedom of movement for the children, constant change in their occupations and opportunities for sleep; and that the teacher should be very carefully selected to look after these children, and, in addition to the teachers, there should also be attendant nurses.

Schools for Mothers.

I am glad to say that parents in this country are getting to understand better than they did how to look after their infant children. At the present moment we have in the country 200 schools for mothers, we have a great number of medical officers who superintend the inspection of the babies, either by weekly or fortnightly visits, and we have a large number of most excellent workers, trained health visitors, who visit the homes of the people and give advice to the mothers and see that they follow the instruction which they receive at school as to the way in which the children ought to be cared for in their homes. The point in which the medical department has taken the most interest, and which is their greatest ambition, is to prevent and remedy the physical disability which hampers a child from taking proper advantage of the education which the State gives it.

PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS.

People are too apt to forget that education in connexion with younger children is primarily physical and not intellectual, and that if a child is to be developed into a really good citizen it is essential that every child should enjoy physical training and suitable exercises even during school hours. The object of the education given to the children is to enable them to be turned out from school in a sound physical condition, and to know, when he or she leaves school, how to look after his or her own health in the following years. I believe that under the system of medical inspection which now obtains in this country, and under the medical treatment which every day is being increased in volume, we are going to secure a much healthier race in the future, and that a great number of these infants who, when they reach the age of 16 will come under the insurance funds, will not make any claims upon those insurance funds, at any rate before they reach the age of 40, with very large increased benefits to the older people in consequence of the improvement in health.

PHYSICAL DEFECTS IN SCHOOL CHILDREN.

I cannot exaggerate the importance I attach to the attention which is given to the health of the children during their school life. The conditions in this country are certainly not worse than those in other countries, but still they exhibit a great deal of neglect. As a result of inspection we are able to classify our figures, and the last figures show what a serious amount of illness and trouble there is among the children of this country at the present time when they first enter the schools. Ten per cent. have their eyesight impaired in some way or other, 5 per cent. their hearing, 3 per cent. suffer from ear disease, 5 per cent. from adenoids, 50 per cent. from serious decay of their teeth—in many cases it goes up to 80 or 90 per cent. of decay, more or less in degree—tuberculosis 2 per cent., heart disease 2 per cent., and malnutrition 10 per cent. I am glad to say that the authorities who have been comparing their statistics, one year with another, have already exhibited a real improvement in the condition of the children. The medical officer at Portsmouth informs the Board that the number of those who in 1908 came to school with dirty bodies was 13.8 per cent., last year it was only 3 per cent.; those who came to school in a verminous condition in 1908 were actually 43.3 per cent., while to-day it is 13 per cent. The medical officer informs me that as a result of the clinics which have just been established in Portsmouth he believes that the difficulty will be very greatly reduced during the current year. From the statistics we have been able to collect through this inspection it is shown that 1 per cent. of the children are regarded as mentally defective, 12½ per cent. of the children are considered backward, and 3 per cent. are considered to be gifted in an abnormal degree. In our schools we are now employing 700 nurses, and there are 21,000 schools; 943 medical

officers are at work in medical service in schools; there are 31 authorities which contribute to hospitals, 56 have already established school clinics, and there is expenditure on treatment by 229 authorities out of 317. The cost in connexion with treatment averages 2d. per child throughout the whole country, and the amount given in support of medical treatment during the financial year ending March 31st last was £50,374. Perhaps I may be allowed to pay a special tribute to the way in which this work has been taken up in London. It has been, perhaps, the most difficult place in which to organize medical treatment. The removals of the population are enormous in the confines of this great city, but, in spite of that, every effort has been made to follow up the children; arrangements have been carried out at 10 hospitals and 23 medical treatment centres, and very good work is being done. I have been rather better than my word in regard to the contribution which I gave to London, and we were able to give them a grant for the last year of £13,683. In addition to that, London receives a grant of £725 in connexion with the open-air schools which have been established by the London County Council, and which are materially beneficial to a certain section of the less robust portion of the school population.

After-School Occupations in London.

Mr. Hoare warmly supported the expenditure of money for promoting the health of the children, and said that he believed the expenditure of public money was much needed in this field. He instanced the case of consumptive children, of whom, he said, there were about 1,200 discovered annually in London schools, and he stated, on the basis of a calculation made by the medical officer of health, that in London alone no less than £1,000,000 has been spent during the last ten years on tuberculous children who had died during the years that they would have been compelled to attend school. He quoted some interesting figures of the results of an inquiry into the occupations of children after leaving school and into the districts from which they came. He said that of the 30,000 boys who leave the London schools every year only 28 per cent. find their work in the skilled trades and 67 per cent. drift into irregular employment. He calculated that each boy had cost the community £100. He also stated that in certain representative skilled trades 60 per cent. of the boys came from the country and 30 per cent. only were London boys. He said also that 70 per cent. of the casual dock labourers in London were London boys and that 90 per cent. of the inmates of our larger common lodging houses, Salvation and Church Army shelters, were London boys.

The Burden on the Rates.

Sir Henry Hibbert, the newly-elected member for Chorley, in a maiden speech which was listened to with great interest and attention, dealt chiefly with the financial side of education. He has been Chairman of the Lancashire Education Committee since its establishment. He welcomed the expenditure upon medical treatment and inspection; but complained that the grant was for treatment only as apart from inspection, and stated that in order to get the best results a grant should be made for the two together. In this opinion he appeared to be supported by the general sense of the House on all sides. He complained that the greatly increased cost of education during recent years had fallen on the ratepayers in very undue proportion. He stated that out of a total increased expenditure of his Board on elementary education of £921,508, the Board of Education had only contributed £100,225, and that in respect of higher education the proportions were about the same. Out of an increased expenditure of £451,901 the Imperial Exchequer had only granted £50,128.

Mr. Balfour on the Evils of the Examination System.

A very important contribution to the debate was made by Mr. Balfour, who heartily welcomed the increased expenditure upon medical inspection and treatment. He said: "Undoubtedly the cost of education has gone up in consequence of the action of this House, and undoubtedly the Government have by their recent legislation forced upon the local authorities increased expenditure, and I admit have forced it upon them in a very good cause. Take the case of medical inspection, which is one of the causes. My own sympathies are entirely in favour of medical inspection. I think many of my hon. friends agree with me that that is a great reform. I do not comment upon the details, but, broadly speaking, I call that a great reform, and I think it would lead us to an amount of knowledge connected with the health of the rising generation and the way to bring up successive generations which we do not possess at this moment. Therefore, my criticism upon the increased cost of education, so far as that branch of it is concerned, is not hostile except in so far as it bears out the statement that that charge was forced upon the local authorities by the Government and by this House, which is the statement I have already made. There are really only two questions that arise upon it. The first is, Can we in any way diminish this growing expenditure? Granting that there are lines of advance which are costly and necessary, is any of the cost which the Department and the House have imposed upon the local authorities unnecessary?"

Mr. Balfour supported the contention of Sir Henry Hibbert, and, with regard to the proportion of the cost contributed by the ratepayers and the taxpayers, he raised the general question whether we were really getting full value for the money we spent on education, and suggested that we had been led into pedantic and too narrow methods by wrong ideals, as an instance of which he criticized the examination system in the following terms:

Superstitions are very apt to grow around policies which may be adopted, but I should like to hear a really good commentary on our system of competitive examination. Ask any parent, from whatever class he may be drawn, who has a son at a secondary school or a university, what he most desires, and the answer will be, "Success in the examination." And so it goes on. I do not deny that in certain respects examinations, and even competitive examinations, are an absolute necessity. But I think we have got into the habit of talking of that which is an unhappy necessity as if it were an admirable institution. Examinations are really most soul-killing institutions. I believe they put the human mind absolutely in a wrong position with regard to knowledge. They are very bad for the teachers and very bad for the taught. You hear it said, "So-and-so's is a most admirable school, and he is the best teacher ever known." The question is asked, "On what ground?" And the reply is to the effect that a certain proportion of his scholars get such and such a number of exhibitions, or whatever it may be. That, and that alone, is the test by which we measure the merits of the system, the results upon the child or young man, and the benefit to the country. I believe it to be wholly and utterly wrong from beginning to end. I am quite aware that some of the praisers of the old system say that we got better men in the public service, and here and there, in the old times, when there was not this violent competition. I know they exaggerate greatly, but do not let the Committee believe there is no truth in what they say. There is some truth in it. We do know, and if we take the trouble we shall all know more of the manner in which you sap the vitality of the young and make them so admirably adapted to successfully pass examinations that, when they have passed them, they are successfully adapted to nothing else whatever.

Sir James Yoxall, Mr. Goldstone, Sir Philip Magnus, and other speakers joined in the debate, which was adjourned.

Medical Treatment of School Children.

In reply to Mr. Alden, Mr. Pease stated that the Board of Education was giving consideration to the question of allowing time spent on medical treatment to count for grant; but he stated that, under the grants now given, more money is received on account of the treatment than is lost through absences of children from school.

Schools for Tuberculous Children.—In reply to Mr. Hoare, who inquired as to how many schools, residential and day, there are for tuberculous children, and how many of them received grants from the Board of Education or local education authorities, Mr. Pease stated that there are seven residential hospitals or sanatoriums providing accommodation for 451 children, that are certified and receive grants from the Board of Education, and that

these hospitals are almost exclusively devoted to the treatment of children suffering from surgical tuberculosis. There are nine non-residential open-air schools certified and receiving grants which make provision for 810 children, of whom the majority are tuberculous. All the open-air schools and five out of the seven hospitals or sanatoriums are provided by local education authorities.

Small-Pox.—In reply to Mr. Crooks, Mr. Herbert Lewis stated that, according to information supplied by the medical officer of health to the Port of London Sanitary Authority, the four cases of small-pox recently landed from a liner had been vaccinated in infancy and that none of them had been successfully revaccinated. They had all suffered from a modified form of small-pox.

Sheep Disease.—In reply to Mr. Charles Bathurst, who asked whether the Board of Agriculture would publish information as to the use of turpentine in the treatment of sheep afflicted with strongylus contortus, at present very prevalent in the south-eastern counties, Mr. Runciman replied that the veterinary advisers of the Board were of opinion that the use of turpentine in sufficient doses to be of value would be dangerous, and that the Board at present, pending the results of investigations now in progress, was unable to advise a remedy for this disease.

Employment of Children Bill.—A bill has been presented by the Home Office to limit the employment of children and young persons in connexion with street trading and other matters. The first clause extends the age from 14 to 16 in respect of the by-laws which may be made under the Employment of Children Act, 1903, for regulating the employment of children and for prohibiting the employment of children in carrying or moving heavy weights and in injurious occupations.

Most of the remainder of the bill restricts the street trading of children and young persons. Clause 2 provides that a boy under the age of 17 or a girl under the age of 18 shall not be employed in or carry on street trading, except that a boy under that age who was lawfully engaged in street trading before the passing of the Act may continue his employment if he holds a licence granted under the Act. These provisions, however, do not apply to boroughs or districts having a population of less than 10,000 persons or to rural areas; but in any of these areas, it is to be lawful for any children over the age of 11 to be employed in or carry on street trading. The local authority is empowered to grant licences for street trading and may make arrangements with any committee constituted under the Education (Choice of Employment) Act, 1910, for giving advice and assistance to juvenile applicants. No licence shall be granted, however, to a boy for whom the authority is able to secure other and more beneficial employment suitable to his capacities and within a reasonable distance of his home; but a licence shall not be refused on the ground of poverty or of the character of the applicant, and not except on special grounds stated in writing by the authority. A condition may be imposed requiring attendance at continuation classes. An exception, however, with respect to street trading is made in favour of children over the age of 14 who are bona fide employed in assisting their parent or guardian in street trading in a proper manner and where the trade constitutes the principal means of support for the family. There are various provisions as to licensing, penalties, etc., and the definition of street trading does not include the sale in a market or fair of agricultural or horticultural produce by a person in the employment of the producer or the occasional sale in streets and public places by those engaged in delivering articles of a similar class from door to door to the customers of their employer.

Animals (Anaesthetics) Bill.—A bill has been presented by Mr. Walter Guinness, supported by Dr. Addison, Sir Frederick Banbury, Lord Henry Cavendish-Bentinck, Mr. Butcher, Mr. Courthope, Mr. Greene, Colonel Lockwood, Sir Charles Rose, and Mr. Snowden, for requiring the administration of an anaesthetic to horses and dogs in connexion with certain operations of veterinary surgery. The operations are specified in the schedules. In the case of horses it is required that the animal should be under the influence of some general anaesthetic sufficient to prevent the animal feeling pain in operations for radical operation for quittor, line firing, operation for stripping the sole, radical operation for poll evil, and radical operation for fistulous withers and, in the case of castration, of horses of more than 2 years of age. The operations mentioned for dogs are ovariotomy and castration, and the third schedule requires the administration of a local or general anaesthetic in horses for neurectomy or unnerving, enucleation of the eyeball, and trephining. A general anaesthetic is held to include, for the purposes of this Act, chloral hydrate and, in the case of a dog, morphine.

Veterinary Surgeons Act Amendment Bill.—A bill has been presented by Sir Frederick Low which provides for the registration of existing practitioners styling themselves veterinary surgeons, and enables the Royal College of Veterinary Surgeons to conduct examinations, prosecutions, and inquiries against unqualified persons, and to have jurisdiction over the *Register* of veterinary surgeons, and to secure the protection of registered veterinary surgeons from unqualified persons practising as such under the cover of registration under the Joint Stock Companies Act.

Bill to Abolish State Vaccination.—A bill has been presented by Mr. Black, supported by Sir John McCallum, Mr. James Parker, Mr. Kellaway, Mr. George Greenwood, Mr. Snowden, Mr. Chancellor, and Mr. Pointer, to repeal the Vaccination Acts. The bill would prohibit any public money being provided for the performance of vaccination, or for the supply of lymph, and it makes it unlawful to require vaccination as a condition of admission to public employment, and to make the absence of vaccination illegal as a ground for the rejection from employment in any public or parochial service, or public institution, charity, hospital, or school.

Admiralty and Board of Trade Sight Tests.—Mr. Robertson, in replying to Mr. Cathcart Wason on April 14th, said that the principal difference between the sight tests used by the Admiralty and those recommended by the Departmental Committee on Sight Tests was that, for testing colour vision, the former used the Edridge-Green lantern and a test with assorted coloured wools. The methods recommended by the Committee consisted of a lantern specially designed and constructed for them, and a somewhat different wool test, and these tests were described in the Committee's report. For testing form vision, Snellen's test types are used by both departments, but he understood that the standard of form vision required by the Admiralty was higher than that which the Board of Trade proposed to enforce on and after January 1st next. Mr. C. Wason: Is the hon. member aware that there is a very considerable amount of dissatisfaction among the mercantile officers over this question; that there has been a very serious diminution in the number of persons who have been tested recently at Liverpool, and that a very large number of candidates have been rejected? Mr. Robertson: The two lines of the questions run in opposite directions. Now the complaint is that the tests of the Board of Trade are too strict, whereas the questions previously put with regard to sight tests suggest that the tests were not strict enough. Mr. C. Wason: The mercantile marine prefer the Admiralty test to the Board of Trade test. Mr. Robertson: We have been told in the House that the Admiralty test is more strict than the Board of Trade test. Mr. Lynch: Has the hon. member considered the advisability of abolishing the wool test altogether as being unscientific? Mr. Robertson: The wool test in its revised form is not unscientific, and the Admiralty use that test.

DURING the last session of the New Zealand Parliament a bill to amend the Births and Deaths Registration Act was passed. Registration under the new Act came into force on March 1st. One of the most important of the new regulations provides for the notification and registration of stillbirths.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Tuberculosis Administration in Edinburgh.

As was stated briefly in our last week's issue (p. 791) the town council of Edinburgh considered the report of its Public Health Committee on the expenses involved in the new arrangements for tuberculosis administration, and referred the matter back to the Public Health Committee and to the Treasurer's Committee. Several speakers referred to the serious responsibilities the Council was taking upon itself and to the enormous expenses it was slipping into. On the other hand it was pointed out that it was impossible to go on treating tuberculosis under the present method, and that unless the Council was prepared to let the public health administration pass out of its hands, and set up the Insurance Committee as a sort of semi-independent authority, it must provide the administrative machinery. The medical officer of health had not time to give to the examination and determination of cases. It would be dangerous to allow a separate authority to be set up in the city, and it would be almost impossible to work through two authorities; further, before it could get a share of the Treasury grant from the two millions voted for tuberculosis the Council must formulate a scheme remitting the matter to the two committees for further report. It was agreed that a report should also be asked for on the estimates submitted by the Insurance Committee.

In connexion with the proposals for the erection of extensive new buildings for the treatment of tuberculosis, the *Scotsman* for April 11th prints a letter of protest from Dr. C. B. Gunn of Peebles. Dr. Gunn thinks "palatial sanatoriums" quite unnecessary. All that is wanted for the successful treatment of consumption is open-air shelters dotted over a hillside facing the south, and surrounding a central administration block. Dr. Gunn states that shelters can be erected by any country joiner at £8 each, and furnished for £4 more. Two hundred such shelters, therefore, would cost £2,400. The administration block with water supply and drainage need not cost more than £3,000; an additional sum of £1,000 would provide for 200 patients two large common rooms for the two sexes, to be used only during the daily cleaning of the shelters and in stormy weather. A male sick-room and a female sick-room with offices could be erected for an additional £1,000. The buildings would all be of wood and galvanized iron; and the total cost for 200 patients would be £7,400. Critics are inclined to ask what will be done when a hillside facing the south cannot be obtained.

Tuberculosis Arrangements in Leith.

At a meeting of the Leith Burgh Insurance Committee held on April 9th, Dr. William Robertson, the medical officer of health for Leith and medical adviser to the committee, stated that the number of cases of pulmonary tuberculosis notified in Leith during 1912 was 307. At present the local authority was treating twenty insured persons in the sanatorium approved by the Local Government Board, and if the committee had only to deal with insured persons these beds would suffice, and the cost would be £1,560 a year at the present charge of 30s. a week. Should, however, sanatorium benefit be extended to the dependants of insured persons, the local authority would be called upon to erect extra accommodation, capital charges would be increased, a larger staff would be needed, and buildings to house the supplemented staff; and altogether from forty to fifty patients would have to be accommodated all the year round for a few years at least until the incidence of the disease was reduced. The cost of treating fifty patients all the year round would be approximately £4,500 including, say, £600 for capital charges; in addition, say, £650 for dispensary treatment would have to be found, a total of £5,150. The Insurance Committee agreed to remit the report to a joint meeting of the Sanatorium and Finance Committees.

Medical Treatment and the Edinburgh School Board.

The Public Health Committee of the Edinburgh School Board is faced with financial difficulties regarding the continuance of medical treatment. It was stated in March that the grant of £850 allocated to the board would be totally exhausted by the end of the month, and the Department had not yet made intimation of the sum to be assigned for the coming year. A continuance of the present scheme of treatment will involve an expenditure of £114 18s. 7d. a month, including an estimated fee to the Edinburgh Royal Infirmary for the *x*-ray treatment of skin diseases. Calculating the salaries of the dentists and oculists as for ten months a year, the sum will amount to about £1,238 per annum. The Scottish Education Department has since informed the Committee that for the purpose of medical treatment a sum similar to that of last year (£7,500) has been set aside in the Scottish Estimates, but that at present the Department cannot state what proportion of that sum will be allocated to the Edinburgh Board.

Medical Inspection of School Children at Leith.

Dr. Arthur S. Walker, the medical officer to the Leith School Board, in his report on the inspection of the school children for the year ending June, 1912, states that in only ten instances did the parents object to the examination of their children taking place in school, and in three of these cases the objections were withdrawn later. There were probably at least fifty defective children who would derive benefit from a special school. The necessity for an open-air school was now greater than ever, for it was almost certain that under the Insurance Act the consumptive wards at Pilton would be filled with adult patients. The proportion of unvaccinated children was not large, but it was matter for regret that it was showing a gradual increase. In all 10,374 children were seen during the year. Nasal obstruction was detected in 395 cases, slight enlargement of the tonsils in 200, and great enlargement in 169; there were 50 children with marked deformity due to rickets. There was great need for medical inspection rooms, so that the work could be done with as little derangement as possible of the school routine. More satisfactory results could have been got in the skin cases had *x*-ray treatment been available. As there is no *x*-ray installation in Leith, Dr. Walker suggested that it might be possible for the school board to co-operate with the hospital directorate in the installation at the hospital of a suitable *x*-ray apparatus, utilizing for that purpose a part of any funds allocated to them by the Education Department for the medical treatment of school children.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Treatment of Tuberculosis.

At the last meeting of the Dublin County Council a resolution was adopted empowering the County Council Insurance Committee to make all necessary arrangements for sanatorium treatment suitable to cases of tuberculosis occurring amongst persons other than insured persons or their dependants, and to make suggestions as to the treatment of all cases dealt with under the Insurance Act.

The Dumping of Lunatics from America.

At a recent meeting of the Clonmel District Lunatic Asylum, the Resident Medical Superintendent, Dr. Harvey, referred again to the very serious aspect of the deportation of insane people from America. The number of persons sent back from asylums in America was large and increasing. One or two instances had occurred since the last meeting. In one the patient had been fifty years in America when he was sent home; on landing he had been put into the train in Dublin and left to find his own way. Another patient had been fourteen years in an asylum in America when sent back to Ireland. In another instance a young man was landed at Queenstown and a telegram sent to his brother in Queen's County. He was brought home and eventually taken into the asylum. The same difficulty has arisen in Cork District Asylum; patients are dumped in Queenstown and sent up to the Cork Asylum irrespective of whether they are of Cork extraction or not. Both Clonmel and Cork Asylums are already overburdened. Dr. Harvey undertook to make out a list of people deported during the last few years, and it is proposed to bring the grievance to the notice of members of Parliament.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

BIRMINGHAM.

THE INSURANCE ACT IN BIRMINGHAM.

NEARLY all the doctors in Birmingham are continuing their services under the National Insurance Act after their first three months' experience of the working of the Act. Some have a very large number of insured persons on their lists, 3,000 and even more, and they find that the percentage of these who require treatment is very much higher than they expected. Some of these people seem to delight in having a doctor of their own, and come to him for the most trivial causes and much more frequently than they need. This is shown very markedly by the way in which the state of the weather affects attendance. On a fine day a large crowd attends the surgeries, while on a wet day only a few patients make their appearance. It is found, however, that the doctor is rarely called unnecessarily to visit insured patients, and that, therefore, the home visiting is not appreciably increased. The most popular doctors are so overwhelmed with the number of patients who attend that thorough examination becomes difficult or impossible.

A few of the approved societies will not accept certificates for sick pay unless they are signed by a doctor on the panel, and this interferes with patients making their own arrangements for treatment with doctors who are not on the panel. The number of insured persons who have not put their names down to any doctor is nearly one-third of the total number. Difficulties will probably arise when these persons are allocated to the panel doctors, as those who have a large number already on their lists will refuse to accept any more.

The National Insurance Act has considerably increased the work of the doctors generally, and so interferes with other important aspects of the lives of medical men. The officers of the Royal Army Medical Corps (Territorial Force) in Birmingham find it very difficult now to attend drills and give lectures and other instructions. On Friday nights there used to be a mess dinner at the R.A.M.C.T. head quarters before the territorial work of the evening, but that has had to be abandoned. Some officers have resigned their commissions, and it seems almost impossible to get new officers. It would appear that the officers of the R.A.M.C.T. will in the future be drawn only from doctors not on the panels, from consultants and specialists, and from dentists with medical qualifications; these are not enough to supply the required number of officers. It is reported that the St. John Ambulance Association in Birmingham has encountered the same difficulty.

Insured patients are not treated in the Birmingham hospitals unless they require special hospital treatment which cannot be given by their panel doctors. The result is that the number of in-patients has remained about the same with a tendency to increase, but the number of out-patients has been diminished by nearly one-half. At the general hospitals the out-patients consist chiefly of women and children. Insured patients are frequently sent by their doctors for consultations at the hospitals, and the consultant writes his opinion to the doctors, but does not treat the patients unless the treatment cannot be carried out at home. A few patients who have entered their names on panel doctors' registers still attempt to get treatment from the hospitals rather than from those doctors. This is, however, gradually diminishing, for all the hospitals are working together in this matter, and refuse treatment to such applicants.

In Birmingham there is a Hospital Saturday Fund which has reached for many years now to over £20,000 per annum, the contributions being received from numerous firms all over the city; a tendency to a decrease in these subscriptions is now noted. As the hospitals are needed quite as much as ever for consultations, special treatment, in-patient treatment, and for dealing with accidents, the workpeople are beginning to realize that they must continue their subscriptions or the work of the hospitals must be greatly curtailed. At first it was thought that the hospitals would suffer greatly from loss of financial support, but the outlook is now brighter for many of the subscriptions which were withdrawn have been commenced again.

The treatment of pulmonary tuberculosis is a difficulty, as the health department seems disposed to take over completely the patients suffering from this disease. This is a serious matter for the clinical teaching in the hospitals, but it is hoped that the general hospitals will be recognized as institutions where pulmonary tuberculosis may be treated, and that the hospitals will receive some grant towards the expense of looking after this large class of patients.

LIVERPOOL.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE education authority has established a clinic for the *x*-ray treatment of ringworm and has appointed Dr. W. C. Oram to the charge of it. The question of establishing a dental clinic is still under consideration. A dental clinic supported by voluntary contribution has been working by way of experiment, and it is possible that within the next few months the undertaking will be taken over and become a permanent establishment financed from the rates.

TREATMENT OF TUBERCULOSIS.

The scheme for the treatment of tuberculosis is being developed. Dr. S. McLelland, Assistant Tuberculosis Officer, with charge of the central dépôt, is to have the assistance of two other tuberculosis officers, one for the north and the other for the south end of the city. Park Hill Hospital will be altogether devoted to tuberculosis, and tuberculosis wards for 250 beds will be built at Fazackerley.

LONDON.

THE AMBULANCE SERVICE IN THE METROPOLIS.

AT the meeting of the London County Council on April 15th, the General Purposes Committee reported that letters had been received from the Hammersmith borough council and the Westminster board of guardians supporting the proposal of the County Council to utilize for the purpose of an ambulance service in London the appliances and ambulances of the Metropolitan Asylums Board, the Port of London Authority, the metropolitan borough councils, and the boards of guardians (BRITISH MEDICAL JOURNAL, November 16th, 1912, p. 1419). Mr. H. L. Jephson, a former chairman of the Public Health Committe, in moving the reference back of the report suggested that information should be obtained as to attitude of the other borough councils and boards of guardians of London towards the Council's proposals. The last Council and the one before it had taken an utterly insincere view of the ambulance question, and he appealed to the members who had just been elected to approach the matter open-mindedly and without party bias. The Council, as the only body vested by Parliament with power to deal with this matter, was responsible for the deaths of large numbers of people whose lives might have been saved had an efficient ambulance service been available. Mr. F. Briant urged that the existing ambulances owned by boards of guardians and other bodies could not be made definitely available to the Council, so that the proposals of the General Purposes Committee were fallacious. In Lambeth, a borough stretching from Westminster Bridge to the Crystal Palace, there were three ambulances belonging to the board of guardians, but these were fully occupied. There was also an ambulance attached to a small-pox hospital, but this could hardly be regarded as a suitable vehicle for the conveyance of ambulance cases. The committee should bring up a definite statement of the number of ambulances actually available in each borough. Mr. H. J. Greenwood, Chairman of the General Purposes Committee, denied that there had been any desire to burke the question. The committee had taken every step it thought desirable to get information, and had come to the conclusion that, on the whole, a more efficient service would be provided by utilizing existing agencies than by putting the ratepayers to the enormous expense of establishing an entirely new organization. On a division the amendment was lost by a large majority, and the report was adopted.

WALES.

KING EDWARD VII HOSPITAL, CARDIFF.

AT the last meeting of the board of management of the King Edward VII Hospital, Cardiff, the resignation of Dr. Herbert Vachell, senior physician, due to his having reached the age limit, was accepted with regret, and he was appointed consulting physician. The chairman and Colonel Bruce Vaughan both paid tributes to Dr. Vachell's long and distinguished services. His association with the hospital had, Colonel Vaughan said, practically covered a period of thirty-six years, as he had been appointed house-surgeon in 1877, when the hospital had only one resident. He had been a member of the honorary medical staff for twenty-eight years, and for two years chairman of the medical board. Great advances had been made in the hospital during Dr. Vachell's period of service, and he would take with him into his retirement the gratitude of every member of the board, of all those who had worked with him, and of thousands of patients who had to thank him for his skill and devotion during their hour of sickness and trial in the hospital. At the same meeting twelve members of the board of management were elected to serve on the newly constructed election committee; the first duty of this committee will be to fill the vacancies created by Dr. Vachell's retirement and the death of the late Dr. Arthur Taylor.

Special Correspondence.

PARIS.

Congress on Physical Education.—Inauguration of New Hôpital de la Pitié.—Results of Operations on Ovaries.

THE recent Congress of Physical Education at the Faculty of Medicine in Paris under the presidency of Professor Landouzy was even more popular than usual, and received great attention both from the medical and the lay press. This was due no doubt to the present movement in France in favour of all forms of sport, physical exercise, and military training.

The new Hôpital de la Pitie was opened on March 20th by the President of the Republic. The hospital, which contains 958 beds, is constructed on modern lines. On entering the central avenue to the hospital, the administrative block is seen on the left, with out-patient dispensary and waiting rooms. The pavilions, of three stories, are disposed in the form of an H. Two blocks are assigned to the medical section, each block containing three services, one on each floor. One branch of the H is for males and one for females. A male ward contains forty beds and has three isolation rooms; a female ward thirty-two beds and eight isolation rooms. The surgical quarters are smaller. Each service is subdivided into two wards, one for clean cases and one for septic cases, and each ward has its operating theatre. The maternity section, containing eighty-five beds, is in a separate block situated far from either the medical or the surgical wards. The kitchen, laundry, disinfection, and sterilizing accommodation are well equipped.

At a recent meeting of the Academy of Medicine M. Walther read a paper on the after-history of cases in which ovariotomy, partial or complete, had been performed. Of the 139 patients on whom he had operated between 1901 and 1912 he had been able to follow up 98. The cure was complete in 68, in 12 some tenderness still existed on deep palpation, in 6 there was still some spontaneous pain, and in 8 no improvement had resulted. Cases of partial resection of both ovaries or total resection on one side and partial resection on the other numbered 73, and of these 18, or 24 per cent., gave birth to children after the operation. In 2 cases, complete resection of one ovary and almost complete removal of the other, the women afterwards bore children.

AMONG a good many books of interest in the 129th catalogue of second-hand medical and surgical works issued by Mr. Henry Kimpton, of 263, High Holborn, we note Sir Jonathan Hutchinson's copy of the report on leprosy drawn up by the College of Physicians in 1867. It was freely annotated by him on interleaved pages, and bound up with a variety of cuttings from journals, maps, and letters bearing on the etiology of leprosy, a subject to which, as is well known, he has devoted great attention.

Correspondence.

TRADE UNIONISM AND MEDICINE.

SIR,—The future organization of the profession is a matter of the greatest importance, and you have opened your columns lately to a discussion of the trade union aspect of the question. May I make a few further remarks on this head, prefacing them with the statement that I am a member of the National Medical Guild, and therefore somewhat enthusiastic on the point? That guild was formed with the idea that there were certain powers which the profession ought to have and which it could not obtain through any existing institution.

If this is the case it ought to be made plain, for our future organization can safely avail itself of almost anything but compromise; that will be fatal.

In the future almost all the profession will be under some sort of contract—some on panels, some Poor Law, asylum, public health (including the large number of part timers), or in other ways. The principles of state health insurance are sure to be extended, and even now there are contracts which are not exactly panel but are yet contracts.

I suggest that this state of affairs will make it necessary for the profession to have a fund to organize interference with these contracts in the form of a strike. It is not enough to compensate those who have struck or who have suffered: we must be in a position to organize striking.

I further suggest that if any body, not being a registered trade union, should organize a strike, it would be liable to attachment of funds on the grounds of conspiracy. Such holding up of the whole fighting fund might be caused by the action of a single obstinate member, perhaps prompted by some enemies of the profession, and we do not lack unscrupulous enemies.

I must confess that this seems to me a very dangerous position. I should like to know, without equivocation, whether the British Medical Association can—I believe it has been discussing the point—obtain immunity for its funds without becoming a trade union, and whether it can become a trade union.

I am a member of the British Medical Association, and shall continue a member, and I feel that I am entitled to ask this question. I have carefully studied the remarks of the solicitor to the Association, and it seems to me quite clear that the answer is in the negative. The British Medical Association can have a fund, held by the Council as a separate trust, and it can do some things with that fund, but it cannot do just the things which we shall need to do. It seems to me that if we compromise we shall be beaten in the next fight—and it is high time we thought about that next fight.

I have one more question: Can the British Medical Association undertake the return to Parliament of a member of the profession with the intention that he shall watch legislation in our interests and be the official parliamentary medium for our views? It would probably be better to have two members, one on each side, in order to avoid any party taint. I wrote to the Medical Secretary some two years ago on this subject, and he informed me it was being considered. As nothing has come of it, I suppose that the consideration was abortive. Again, it appears to me that it is of the first importance that we should have a definite official representative, and that the British Medical Association cannot provide one, owing to that action being quite outside any possible constitution that it could assume. This also, as the other, is a question allowing of a Yes or No answer; we have already tried treating the matter with a compromise.

May I in conclusion state that the National Medical Guild is advised that these two powers can only be obtained by registration under the Trade Union Acts, and that this body has been formed accordingly to obtain these powers, among others, for the profession. It is in no sense antagonistic to the British Medical Association, but supplementary.—I am, etc.,

London, W., April 12th. GORDON R. WARD.

THE FORM AND POSITION OF THE STOMACH.

SIR,—I have worked for the past three months at the Roentgeninstitut of the Allgemeine Poliklinik in Vienna, and I have been struck with the difference in opinion as

to the form and position of the stomach as expressed by your correspondents, and the teaching of Dr. Siegmund Kreuzfuchs at the Poliklinik.

I would like to give a brief account of his teaching. The patients are examined in the erect posture with the screen at 9 a.m.; no food has been taken after 8 p.m. on the previous evening.

The First Examination. — This is made before any barium is given. All that can be made out is the small round light area corresponding to the air bubble at the fundus of the stomach.

The Second Examination.—This is made after the patient has taken 6 oz. of barium water, and a view of the practically empty stomach is obtained. The air bubble is now seen to have a semicircular form, the base of the semicircle corresponding to the upper level of the fluid in the stomach. The shape of the stomach is not a J, but the pylorus is the lowest point. In normal stomachs the pylorus is in the middle line, or is on the left of the middle line, and it is directed towards the right side. It corresponds in level to the second or third lumbar vertebra.

The Third Examination.—This is made after a barium meal. The condition of the stomach now is not constant, and it may assume one of two types in the same individual.

Type A.—A well-contracted appearance of the stomach, which is filled with barium throughout, may be observed, with regular peristaltic waves, which begin at the middle of the greater curvature and pass to the pylorus. The shape of the stomach is tubular and forms a J with the pyloric part ascending, and with the pylorus looking upwards and to the right. At intervals some of the barium mass is seen to pass into the duodenum. The pylorus is always on the right of the middle line, and the greater the amount of the barium meal the more does the pylorus extend to the right. The pylorus may extend so far to the right that the masses which pass into the duodenum are directed from right to left until they reach the fixed vertical second part of the duodenum. In other cases the pyloric shadow entirely covers the first part of the duodenum, so that its barium content cannot be observed at all.

Type B.—After a varying interval the stomach shadow may gradually change in shape and Type B results. Instead of the well-contracted stomach, the badly or so-called hypotonic stomach is seen. The shadow is sac-shaped and the barium mass no longer fills the stomach, but sinks down to a certain degree. The greater curvature, which in Type A was in the upper abdomen, may now be seen in the lower abdomen. The pylorus is in the same position as in Type A, or it may even extend more to the right side. The stomach is quiet, no waves are seen, and no food passes into the duodenum. In cases in which the duodenum is not covered by the pars pylorica, we can see a light area between the pylorus and the duodenum—on the one side the shadow of the pylorus, which is convex, and on the other side the beginning of the duodenum, which appears concave and is applied to the convex pylorus. After an interval the shape changes again and Type A results. These two cycles alternate, and might be described as the systolic and diastolic phases of the stomach.

The changes are explained as being due to the reaction of the food mass in the duodenum. If the reaction in the duodenum is alkaline the shape A obtains, and the stomach contents are gradually passed in until a certain degree of acidity is present. Then the pylorus is closed, and the form B results. As the secretions from the adnexae of the duodenum cause alkalescence again the shape gradually changes to type A, and when this phase exists for a certain time we may get the form and position of the practically empty stomach again.

The Fourth Examination.—This is made four hours after the meal, and the practically empty stomach is again seen with the pylorus on the left of the middle line.

It is very interesting to observe that these *x*-ray appearances exactly correspond to the positions of the stomach found by His in the formalin hardened specimens, with the stomach filled to a greater or lesser extent with food, in fifteen persons whose death was due to violence. These he described in the *Archiv für Anatomie*, 1903.—I am, etc.,

HAROLD BLACK, M.B., D.P.H.,
Makay Wilson Travelling Medical Scholar,
Vienna, April 8th. Queen's University of Belfast.

SIR,—To judge from Dr. Hertz's last letter, in which he quotes remarks of Mr. A. H. Burgess and Dr. A. E. Barclay, and also from Professor Elliot Smith's letter, there appears to be considerable misapprehension as to my position in the discussion on this subject.

In order to be able to restore an abnormal stomach to a condition as near the normal as possible, one must have a conception of what the normal stomach is with regard to its position, shape, and especially motor functions, hence the importance of this subject to surgeons. I published my conception of this in 1908 (epitomising it in my letter of March 29th last), and nothing that has been published since has, so far, led me to change my view. At the interview referred to by Dr. Hertz, who states that Dr. Barclay demonstrated to me "*the normal anatomy of the stomach with the x rays*," Dr. Barclay, as a matter of fact, regretted that he could not show me a normal case. He showed me several cases of probable duodenal ulcer, several of probable appendicular dyspepsia, one patient had marked gastroptosis, and another had possibly a gastric cancer.

While I stated my appreciation of Dr. Barclay's enthusiasm and courtesy, and the excellence of the *x*-ray work, it is impossible that I could have expressed myself as in any way convinced that my views of the normal stomach were wrong. I considered that, if anything, Dr. Barclay's demonstration supported my views. Dr. Barclay's ideas as to the position of the pylorus agreed with mine, and thereby differed from those of Dr. Jordan (whose work and results have received Dr. Hertz's approval). Dr. Jordan locates the pylorus of the normal stomach, shown in the *Archives of the Röntgen Ray* of January, 1911, as being opposite and to the left of the *fourth* lumbar vertebra, while Dr. Barclay places it at the level and to the right of the *second* lumbar vertebra, both the patients being in the erect posture. I regret that I used inadvertently, in my last letter, the word "practically" instead of *comparatively* with regard to the fixity of the pylorus. I agree that it may descend from opposite the first lumbar vertebra, which is its position when the patient is supine, to opposite the second lumbar, when the patient stands, but I deny that the pylorus of the normal stomach can be even pulled down, without damage, to opposite the fourth lumbar vertebra.

We have, therefore, two distinguished skiagraphists, both of whom are evidently relied upon by Dr. Hertz, giving widely divergent views. Does Dr. Hertz think that both views are correct? Dr. Hertz states that I alone seem to be "content to ignore recent advances in our knowledge." These recent advances in our knowledge of the form and position of the living stomach, according to Professor Elliot Smith as well as Dr. Hertz, are based upon radioscopic examination. The interpretations of Drs. Barclay, Jordan, Maclaren, and Daugherty (the latter two stating that normally the pylorus is practically a pelvic organ) in varying so widely show how far from being final some of the "recent advances" are! I fail to see how any one can be dogmatic, at present, if he is guided by *x*-ray work alone.

I should like now to discuss at greater length the question of the "middle sphincter," as I have called it for want of a better name. No one denies the presence of a sphincter at the pylorus, yet in some cases, as was many years ago pointed out by Dr. W. J. Mayo, the only way in which the pylorus can be located, when the abdomen is opened, is by finding the vertical vein which indicates the site of this sphincter. In such cases there may be no evidence of a sphincter, either on inspection or palpation, because it is completely relaxed. Still less will one expect to find evidence of the less definite middle sphincter, which after all only marks the beginning of the muscularly active pyloric part, especially when the muscle is relaxed under the influence of a general anaesthetic. It will be admitted, however, that the better the tone the better the action of the muscle, and the more suited will be the conditions for purposes of demonstration. In certain extragastric lesions which are causes of dyspepsia, such as duodenal ulcer or some forms of appendicitis, the stomach is in a condition of hypertonus. At least Drs. Barclay and Hertz say so, and I am perfectly in accord with them because one finds this frequently at operation. This fact has been drawn attention to repeatedly by other surgeons, for example, Sir Berkeley Moynihan.

At Dr. Barclay's demonstration to me in autumn, 1911, he admitted that in some of the cases a "check" occurred during the passage of food along the stomach at the point where I located the middle sphincter, and this even when the stronger pyloric sphincter was allowing food to pass, almost without delay. Dr. Barclay, after more recent research, writes in the *Medical Chronicle* of February, 1913, pp. 262 and 263, while discussing what he calls "duodenal irritation":

> The stomach is invariably J-shaped, and not a trace of atony is observed; in fact, hypertony is often so marked that it may require quite a large quantity of food to canalize the empty stomach. Such cases are at first suggestive of an hourglass contraction, and in two of them (Nos. 97 and 273) I actually suspected the presence of an organic lesion half way down the stomach, because of the way in which the contraction of the walls resisted the passage of the food.
>
> The action of gravity is an important factor in canalizing the empty stomach, and it frequently happens that at the lowest part of the organ there is a considerable pause in the progress of the food before it enters the pars pylorica. H. M. W. Gray, of Aberdeen, interpreted this sign as an indication that there is normally a sphincter at this point, probably indicated by the incisura of His, and on this theory laid it down that the stoma of a gastro-jejunostomy should be made beyond this point.

Dr. Barclay does not admit that this considerable pause is due to the action of a sphincter. It must be due to the action of a collection of circular fibres, and it occurs at the same part of the stomach in each case, "half way down"! Why, then, do Dr. Hertz and Professor Elliot Smith, as skilled impartial judges, object so strongly to the term "middle sphincter," a term used "for the sake of brevity" and "for want of a better name"? A study of Dr. Jordan's skiagram of the normal stomach shown in the *Archives of the Röntgen Ray*, January, 1911, will support my contention, published in the *Lancet* of December 3rd, 1910, that certain radiographers and others mistake this middle sphincter for the pylorus.

On a further perusal of Dr. Barclay's recent paper it is revealed that he has seen several cases where the spasm of this middle circular band of fibres is so intense, even after gastro-enterostomy has been done, that hourglass stomach was diagnosed, yet nothing was found at a subsequent operation "to account for the hourglass." This supports my statement, made in 1908, that the middle sphincter acts as well after as before gastro-enterostomy, and that one is able to obtain food from the cardiac end of the stomach, or see it there after a bismuth meal, even as long as 3½ hours after the food has been swallowed.

So much for hypertonic cases. With regard to normal stomachs, Dr. Barclay says (p. 261):

> In many apparently normal stomachs a certain degree of spasmodic contraction of the middle of the body was noted, but in most of them the application of massage to the abdomen relaxed the spasm at once, but in a small number, notably Nos. 369 and 398, the contraction was thought to be organic in origin as it could not be relaxed by massage or the administration of belladonna. In Case 398 this spasm persisted, and was so definite that at my instance the surgeon again explored, and found nothing whatever to account for it; while in Case 369 the simple manipulation of the stomach was sufficient to effect a perfect cure, and re-examination after the laparotomy showed no trace of the contraction previously noted.

In no paper which I have seen has there appeared any explanation of why food should be checked at this part with such regularity as that recorded by Dr. Barclay. If a better name can be suggested than "middle sphincter" for this collection of fibres which so readily undergoes "spasmodic" contraction, I shall be very pleased.

I may say here that a study of Dr. Barclay's paper confirms my conviction that any operative procedure which involves gastro-enterostomy should include investigation and also, when necessary and feasible at the same sitting, treatment of all parts, lesions of which may act reflexly and deleteriously on the stomach.

I am sorry that Dr. Hertz and his friends cannot understand the meaning of "Conclusion 3" in my letter of March 29th, because it seems quite clear to several medical men here in the north to whom I have shown the data on which it was founded and of which Dr. Hertz is cognizant. I have every hope that Dr. Hertz will understand the meaning of, even if he does not agree with, Conclusion 3, if he refreshes his memory by referring to my paper in the *Lancet* of December 3rd, 1910, and to that of Dr. Ribas, of Barcelona, in the *Archives of the Röntgen Ray*, January, 1911.

In connexion with this discussion I should like to ask Dr. Hertz the following questions: (1) Why, in certain cases after gastro-enterostomy, does a patient vomit bile for a few days and then stop as his strength increases? (2) Why, in certain of such cases, does the patient vomit bile-stained fluid which shows no trace of milk or other fluid which has been swallowed but a few minutes previously?

I have now read the report of Dr. Hertz's paper and the discussion on it as reported in the *Proceedings* of the Royal Society of Medicine, March, 1913. I am glad to find that the reports on which I based my criticisms did not omit or distort any detail which would have caused me to modify my objections to his views. I note that objections were raised also by several of the after speakers. I point out that I waited for a week before criticising Dr. Hertz's ideas as embodied in the reports of the BRITISH MEDICAL JOURNAL and *Lancet*. I thought he would be sure to correct at once any omission or statement which laid his views open to misconstruction.

I am sorry to hear that certain anatomists have gone so far as to accept for publication in their textbooks any *drawings* which are based on such conflicting data as skiagraphists have, so far, submitted. These observers, as I have shown, cannot agree about such a fundamental point as the position of the pylorus. It will be observed that Dr. Hertz has not made any references to these discrepancies.

In conclusion, I should like to point out that I prefer to base my conception of the normal stomach not only on skiagraphic findings but also on the work of anatomists such as Cunningham and Birmingham, and on what can be observed clinically and during operations, especially when the latter are conducted under local anaesthesia. The histological structure and pathological tendencies of the cardiac and pyloric portions would seem, further, to indicate that these parts of the stomach are naturally differentiated while performing their functions.—I am, etc.,

Aberdeen, April 14th. H. M. W. GRAY.

IMMEDIATE OPERATION IN APPENDICITIS.

SIR,—As so much interest has been excited by the publication of Mr. Edmund Owen's paper in the JOURNAL advocating immediate operation in acute cases of appendicitis, I think that the following results of operation for this disease at the Hull Royal Infirmary may be instructive.

Our custom is to admit these cases in the first instance under the care of the physician of the week; if he can see the case at once, he almost invariably transfers it to the surgeon for immediate operation. If the physician is not able to see the case at once the surgeon of the week is sent for. In this way every case is operated on as soon as possible after admission.

The following is a copy from the report of the results of operation on the cases admitted during the year 1912:

Appendicitis.	Cases.	Deaths.
Acute, with appendicectomy	56	0
Chronic, with appendicectomy	52	0
Abscess, with appendicectomy	10	0
With general peritonitis	4	0
Abscess, without appendicectomy	54	4

In this series of 176 cases the 4 deaths were those in which the appendix was not removed, all being almost moribund. Our custom is when abscess has formed to be content with the evacuation of the pus, unless the appendix can be removed without separation of adhesions, but our statistics seem to point to the removal of the *fons et origo mali* in every case. During the past week I have operated on 4 cases, 2 of which were within thirty-six hours of the onset, and yet were only just caught in time to obviate a perforation.

I have no hesitation in advocating operation at the earliest possible moment.—I am, etc.,

EDWARD HARRISON, F.R.C.S.,
April 10th. Honorary Surgeon, Hull Royal Infirmary.

ALIMENTARY TOXAEMIA.

SIR,—I am unfortunately unable to take part in the discussion on alimentary toxaemia, but feel I would like to add a fact of much value to the many that will doubtless be brought forward.

It concerns the case of a boy whose large bowel was removed by Mr. Arbuthnot Lane in Guy's Hospital in November, 1906. At that time the boy had intractable constipation, stasis, very marked toxaemic symptoms, and deep pigmentation, which rendered it impossible for him to follow his occupation and made his life unbearable. An interval of six years and four months have now elapsed, and he is a fine specimen of manhood; he is 5 ft. 11¾ in. in height, his weight is 11 st. 4 lb. as compared with 7 st. at the time of the operation; all the toxic symptoms have disappeared, the evacuations are formed, and he is enabled to follow a useful occupation, being now in perfect health.

I leave the facts of this interesting case to your consideration in view of the doubt which has been expressed by Dr. Hale White and others as to the subsequent history of these cases.—I am, etc.,

Wittersham, Kent, April 10th. C. FORTESCUE PRIDHAM.

THE ACTION OF SALICYLIC ACID AND CHEMICALLY ALLIED BODIES IN RHEUMATIC FEVER.

SIR,—I have just read, on my return from a holiday, Professor Stockman's very interesting paper in the JOURNAL of March 22nd on the above subject.

There are some statements in it which I feel should not pass unchallenged; I cannot, of course, question his statement that with the *Micrococcus rheumaticus* "I have never been able to produce in animals any of the symptoms or lesions of rheumatic fever," but, at the same time, I can only express my greatest surprise. In the absence of details of experiments it is not possible to give an opinion as to cause of the failure, but I, and several other workers, find no difficulty in producing recoverable arthritis, relapses, etc. I have now inoculated a considerable number of rabbits, and in at least 80 per cent. of the cases arthritis has been produced where the organisms from definite rheumatic cases have been employed. Relapses have occurred in a considerable number of cases and endocarditis in a few. Again, Professor Stockman says, and I presume he is speaking of the organism isolated by me: "It is an organism difficult to grow satisfactorily and easily killed." This statement is absolutely contrary to my experience, for the organism grows with the greatest ease on ordinary culture media, lives almost indefinitely (at least three years without subculture) and resists 60° C. for over an hour.

I do not object to criticism, however severe, nor to statements that the bacteriology of acute rheumatism is still an undecided question. Every one has a right to his own judgement on the facts, but I do feel it is only fair that scientific workers, especially those of the standing of my friend Professor Stockman, should fully study the literature on the subject they are criticizing, and thus avoid such errors as I have pointed out in this paper.

In regard to vaccine therapy, Professor Stockman does not tell us whether the cases he has been dealing with were acute or chronic. As the paper deals mainly with acute rheumatism, I presume they were of that type. If so, then failure to produce curative effects, or even a reaction, does not in my opinion in any way invalidate the conclusions that the streptococcus is a causal agent in acute rheumatism. Recently Dr. Yates and I have been working at vaccine therapy, and at present, though the work is still incomplete, our view is that vaccines may prove useful in preventing relapses if used during the apyrexial period of the disease, but we are not prepared to speak very definitely on this subject at present.—I am, etc.,

Liverpool, April 8th. J. M. BEATTIE.

RHEUMATOID ARTHRITIS.

SIR,—With reference to Sir James Barr's address on rheumatoid arthritis published in your last issue, I should like to ask him on what evidence he bases his opinion that the proximate cause of this disease is "a mild chronic acidosis, which extracts the lime salts from the fibrous tissue, muscles, nerves, cartilages, and bones." He further states that the extraction of the lime salts from the fibrous tissue causes it to swell, while the loss of the lime salts from the muscles causes them to waste—two apparently contradictory statements. Sir James Barr is very iconoclastic in his attitude towards former workers and writers on the subject, but without venturing to enter into this special domain of his, I wish to take strong exception to a portion of one statement in the concluding part of his address, namely, that "arsenic, potassium iodide, guaiacol, and a host of remedies commonly prescribed are worse than useless."

I have employed guaiacol carbonate and potassium iodide in some thousands of cases, and I am convinced that this combination is capable in the great majority of cases of arresting the disease, and so of preventing the frightful suffering connected with movements of the affected joints, a condition which is so common in cases of unrelieved rheumatoid arthritis.—I am, etc.,

London, W., April 14th. ARTHUR P. LUFF.

RECENT ADVANCES IN THE DIAGNOSIS, PROGNOSIS, AND TREATMENT OF HEART DISEASE.

SIR,—The letter from Dr. Thomas Lewis in your last issue does not call for comment, save that I consider the only course for Dr. Lewis to take after the appearance of the letters in the JOURNAL of March 22nd and 29th was to withdraw his insinuations and apologise. I very much regret that he has not done so. For the rest, I am satisfied to abide by the opinion of your readers who have followed the correspondence.—I am, etc.,

London, W., April 15th. FREDERICK W. PRICE.

TUBERCULOSIS OFFICERS, SCHOOL MEDICAL OFFICERS, AND THE MEDICAL OFFICERS OF HEALTH (SUPERANNUATION) BILL.

SIR,—I should like to thank Dr. Alexander Graham for his timely letter in the BRITISH MEDICAL JOURNAL of April 12th, and to support his appeal for the urgent need of an amendment to the Medical Officers of Health (Superannuation) Bill, so that under "medical officers of health" school medical officers and tuberculosis officers will be included. The ranks of the medical officers of health in the future must be recruited from school medical officers, superintendents of infectious hospitals, and tuberculosis officers, and most of these officers look forward to entering the main branch of the public health service. I wish specially to urge the inclusion of tuberculosis officers for the following reasons:

1. They are whole-time medical officers, and as such are unable to augment their income by doing other work. A part-time medical officer of health is included in the bill. He usually has a large and lucrative general practice, and is in a better financial position than the tuberculosis officer.

2. Better men will undoubtedly apply for these posts if there is an assured superannuation scheme attached to them. The advantage to the community is obvious.

3. If medical officers of health are singled out for the superannuation scheme, and tuberculosis officers excluded, the latter will feel under a grievance which cannot favourably affect the harmonious relations between them which are necessary in the public interest.

4. It should be easy and practical to include tuberculosis officers because all these appointments are quite new, and therefore payments can be made in every case from the commencement of the appointment.

I trust every tuberculosis officer will support Dr. Alexander Graham in this important matter.—I am, etc.,

G. LISSANT COX,
Tuberculosis Officer for the County Palatine of Lancaster.

Preston, April 12th.

SIR,—Dr. Alexander Graham deserves the thanks of his colleagues in the school medical service for bringing this matter forward. The need for a scheme of superannuation in the case of medical officers of health is generally admitted, but strong as their claim is, that of school medical officers appears equally, if not more, urgent. By reason probably of the fact that the school medical service was instituted at a time when the financial burdens imposed upon local authorities had reached high-water mark, the salaries paid for appointments of school medical officers compares very badly with those of their

colleagues in the public health service, and I think it has never been seriously suggested that the latter are overpaid.

As your correspondent points out, precisely the same arguments in favour of the superannuation of medical officers of health apply therefore with equal or greater force to the appointments of school medical officer. It is possible that tuberculosis officers may make a similar claim, but, seeing that as a class they are relatively better paid, I do not personally think that their claim is a matter of equal urgency.

It is to be hoped that all school medical officers will follow your correspondent's suggestions and bestir themselves with the object of securing, if possible, the necessary amendment to the bill in its Committee stage.—I am, etc.,

W. Spencer Badger,
(Medical Officer Education).

Wolverhampton, April 14th.

PREFERENTIAL PAYMENTS IN BANKRUPTCY.

Sir,—There is at present before Standing Committee B of this House a measure, entitled "A Bill to Amend the Law with Respect to Bankruptcy and Deeds of Arrangement."

As the law now exists under the preferential payment in Bankruptcy Act of 1888, there shall be paid in priority to all other debts, certain rents, rates, salaries, or wages of clerks, servants, workmen, etc. To these classes entitled to priority I sought to add—without success—the fees due to professional nurses. I instanced cases where, after prolonged attendance on a patient, they were obliged to accept a compensation of 2s. in the pound, the same as an ordinary trade debtor. I am confident that it only requires public attention to be drawn to the gross injustice possible to a noble profession under the existing law to have it altered.

If those interested or sympathetic will only speak out between now and the report stage of the bill, I have no doubt the necessary amendment of the law would appeal to the sense of justice of all parties in the House.

In my opinion the medical profession have also a strong claim for an amendment in the existing law, under which, as it is at present, their fees only rank as ordinary creditors'. I think that for some considerable time before a receiving order is granted their fees should rank with those entitled to priority of treatment.—I am, etc.,

Patrick White.

House of Commons, April 15th.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Examination for Appointments as Acting Surgeons.

At the examination for the Naval Medical Service held on April 7th, 8th, 9th, and 10th, fourteen candidates were successful, and obtained the following marks:

Name.	Marks.	Medical Schools.
Mr. A. M. Henry	1,785 ...	Guy's Hospital.
Mr. G. F. B. Page, M.B....	1,605 ...	Edinburgh University.
Mr. A. J. Patterson ...	1,563 ...	Royal College of Surgeons, Dublin.
Mr. D. G. Arthur	1,465 ...	St. Bartholomew's Hospital.
Mr. B. E. P. Sayers ...	1,457 ...	Middlesex Hospital.
Mr. W. A. S. Duck... ...	1,455 ...	Middlesex Hospital.
Mr. P. B. Wallis	1,413 ...	Cambridge University and St. Bartholomew's Hospital.
Mr. M. Mechan	1,385 ...	University College, National University, Ireland, and Royal College of Surgeons, Ireland.
Mr. H. E. T. White, M.B....	1,373 ...	Edinburgh University.
Mr. A. Simpson, M.B. ...	1,343 ...	Edinburgh University.
Mr. F. C. Wright	1,318 ...	St. Bartholomew's Hospital.
Mr. I. S. Gabe	1,290 ...	London Hospital.
Mr. A. J. Tozer	...	St. Mary's Hospital.
Mr. D. P. H. Pearson ...	1,283 ...	University College, Cork.

The maximum number of marks obtainable is 2,400.

An institute for the investigation of radium is now in working order at Heidelberg, and will be formally opened on May 1st. The director is Professor Ph. Lenard. There is a special medical department in connexion with the cancer institute and the medical clinic.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The following candidates have been approved at the examination indicated:

D.P.H. (*Both Parts*).—W. W. Adamson, A. Brownlee, *G. R. Bruce, C. C. Cumming (Major, R.A.M.C.), A. da Gama, H. N. Featonby, R. D. Goldie, J. R. Haldane, A. B. Hamilton, W. Johnstone, M. J. Quirke (Captain, I.M.S.), T. Ruddock-West, W. Rutherford, F. V. G. Scholes, J. D. Smith, *W. Templeton, F. E. A. Webb, A. R. Wellington, L. S. Willox.

*Passed with distinction.

UNIVERSITY OF LONDON.

School of Medicine for Women.

The Council has appointed Mrs. Willey, M.D., M.S., as Lecturer in Midwifery to succeed Mrs. Scharlieb, M.D., M.S., resigned.

The Dr. Edith Pechey Phipson Post-Graduate Scholarship of the value of £40 for one, two, or three years, will be awarded in June. Applications should be sent by May 31st to the Secretary. Entrance scholarships of the value of £60 for three or five years, £20 for four years, and £30 will be awarded on the result of an examination to be held on July 22nd and following days. The Agnes Guthrie Bursary for Dental Students, of the value of £60, will be awarded in September. All particulars can be obtained from the Secretary, 8, Hunter Street, Brunswick Square, W.C.

UNIVERSITY OF LIVERPOOL.

The following candidates have been approved at the examination indicated:

D.T.M.—J. G. Becker, C. Forsyth, M. C. R. Grahame, K. K. Grieve, A. R. Hargreaves, P. Hiranand, O. E. Jackson, M. MacKelvie, J. McP. MacKinnon, R. J. A. Macmillan, C. E. F. Mouat-Biggs, E. Olubomi-Beckley, D. S. Puttanna, J. H. Reford, F. D. Walker, U. B. Yin, W. A. Young.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A quarterly Council was held on April 10th, Sir Rickman J. Godlee, Bart., President, in the chair.

Gifts.

A vote of thanks was passed to Dr. Charles Hose for the gift of skeletons of adult orangs and other specimens to the museum.

Prizes.

The Jacksonian Prize was awarded to Mr. F. W. Goyder, F.R.C.S., of Bradford, Yorks, for his dissertation on "The Embryology and Treatment of Cleft Palate."

The Triennial Prize, together with the John Hunter medal, was awarded to Dr. W. Blair Bell, M.R.C.S., of Liverpool, for his dissertation on "The Anatomy and Physiology of the Pituitary Body."

The subject selected for the Jacksonian Essay for 1914 is "The Pathology, Diagnosis, and Treatment of Trigeminal Neuralgia."

The subject selected for the Triennial Essay for 1913-1915 is "The Human and Comparative Anatomy and Physiology of the Cerebellum."

The Sir Gilbert Blane medals were awarded to Fleet Surgeon Richard Cleveland Munday, H.M.S. *Hyacinth*, 1910, and to Fleet Surgeon Edward Sutton, H.M.S. *Highflyer*, 1911, both members of the College.

Examiner in Dental Surgery.

Mr. F. Hopson, L.D.S.Eng., Guy's Hospital, was elected on to the Board of Examiners in Dental Surgery.

Central Midwives Board.

The thanks of the Council were given to Dr. Golding-Bird for his services as the representative of the College on the Central Midwives Board.

Disciplinary Action.

A member was removed in consequence of his advertisements and objectionable pamphlets in connexion with practices carried on in Sydney, New South Wales.

International Medical Congress.

A conversazione will be given on August 7th at the College to the members of the Seventeenth International Congress of Medicine.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

The Fellowship.

At the meeting on April 4th the following candidates were elected to the Fellowship:

A. Croly; W. P. MacArthur, Captain, R.A.M.C.; R. J. Rowlette.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Appointments.

AT a meeting on April 3rd Mr. J. S. Pegum and Mr. P. D. Sullivan were respectively appointed Senior and Second Assistant to the Professor of Anatomy.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE (*Part I Chemistry, and Part II Physics*).—N. J. Ainsworth, R. Aspinall-Stivala, *C. Bethencourt, F. Blake, †H. H. Castle, A. M. Clément, B. S. Collings, *G. W. Coombes, *Jane Crawford, †B. Crossley-Meates, *F. G. L. Dawson, S. G. Dunn, S. E. D. A. El Daab, †A. A. H. El Zeneiny, J. L. Goddard, J. P. J. J. Hagron, *W. R. G. Hearnden, A. G. Hewer, J. Hope, †J. R. Houghton, *Mabel M. Ingram, T. C. James, M. Kamil, *P. Lloyd-Williams, T. H. McLeod, H. Masters, *H. Morris-Jones. A. Peine, E. R. Peirce, W. E. Powell, *P. Randall, F. H. Stuttaford, *F. Tagger, *C. W. Tomkinson, *C. Vincent-Brown, R. A. Walker, E. M. Webster, *G. A. O. White, B. C. Woodroffe.

* Part I only. † Part II only.

FIRST COLLEGE (*Part III, Elementary Biology*).—R. Aspinall-Stivala, E. R. Batho, E. G. P. Bousfield, H. W. Breese, C. H. Carroll, N. Chena, B. S. Collings, A. R. Crane, F. G. L. Dawson, H. S. Drabble, K. M. K. Duff, S. G. Dunn, R. Erskine-Gray, R. B. Gibson, J. L. Goddard, E. G. Harris, T. C. Higgins, J. Hope, R. Hope, O. H. Hyman, W. A. Jackman, A. K. I. Jones, A. E. A. Khair, L. G. Lunnon, K. F. McAlpin, A. Magill, R. K. Marwood, A. M. G. Mishad, K. R. O'Brien. A. L. S. Payne, G. A. Pennant, W. E. Powell, D. S. Pracy, R. E. Rampling, F. N. Reynolds. A. H. Richardson, G. Looker, S. C. Shaw, C. Shelton, G. E. L. Simons, M. O. Simpscn, B. L. Skeggs, H. L. Slaughter, R. M. Somerset, J. N. Terry, D. R. Thomas, H. B. Troup, D. L. Wilson, L. H. Woods.

SECOND COLLEGE (*Anatomy and Physiology*).—A. W. C. Bennett, H. C. H. Bull, E. J. Coombe, G. L. Cutts, A. T. Dally, W. H. Dye, J. Fox-Russell, C. Gould, F. H. S. Greenish, F. E. Higgins, H. R. W. Husbands, R. W. Hodgson-Jones, H. L. Hughes, F. B. Jago, N. S. Jatar, J. Kyle, R. D. Langdale-Kelham, C. G. Learoyd, E. A. Leviseur, S. J. L. Lindeman, R. W. Little, E. M. Litchfield, G. S. B. Long, L. A. McAfee, J. E. C. Maguire, R. H. Maingot, N. S, Nairne, N. V. Navalkar, J. F. M. Payne, F. Porter-Smith, E. A. Prichard-Evans, I. I. A. Rahman, E. D. Richardson, G. Robinson, E. S. Rowbotham, J. C. Russell, R. Sinha, J. B. G. Skelton, D. M. Smith, A. H. Warde, B. Whitehead, A. G. Williams, W. E. Wilson.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—F. J. D. Cass, F. E. Gillieron, Martha H. Hoahing, E. Butler, W. A. Mein, and E. A. Hamilton.

SECOND COLLEGE.—J. J. Armistead, W. G. Bowie, *F. B. Macaskie, S. W. Hoyland, and J. V. R. Rohan.

THIRD COLLEGE.—A. Craig, Q. Stewart, A. F. Readdie, M. McL. Bainbridge, and M. Seeraj.

FINAL.—S. Wright, J. G. Lessey, W. A. Reardon, B. S. Raj, Kathleen G. Wall, J. S. E. De Soysa, G. A. Hodges, A. C. Fleming, J. W. Craig, W. Brennan, E. B. Steele, J. A. Whitla, and S. Brennan.

* Passed with distinction.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

FINAL COLLEGE.—Mary J. Ahern, B. N. Blood, J. Barrett, D. W. Beamish, H. J. Burke, P. D. Daly, A. J. Faulkner, F. E. Fitzmaurice, J. J. Glynn, T. J. Kelly, A. P. Kennedy, J. Kirker, V. J. Lawless, F. J. McCarthy, T. Mulcahy, C. Petit, C. L. Sproule, T. J. Sinnott, G. Wilson, W. Waugh.

A QUARTERLY court of the directors of the Society for the Relief of Widows and Orphans of Medical Men was held on April 9th, Sir Thomas Boor Crosby, President, in the chair. Fifteen directors were present. Four gentlemen were elected members of the society. The death of one of the widows in receipt of grants, who had been on the funds since 1872 and had received from the society the sum of £2,500, was reported. Her husband had paid in subscriptions 50 guineas. The Acting Treasurer, Dr. F. de Havilland Hall, reported that the society would shortly benefit to a very large extent under the will of the late Mr. James Brickwell, who was elected a member in 1833 and died in 1893. By his will he made the society his residuary legatee, subject to his son's life interest in the money. The total amount of the legacy will probably exceed £36,000. The invested funds of the society now amount to £101,600. The annual general meeting will be held on May 6th. Membership is open to any registered medical practitioner who at the time of his election is resident within a twenty-mile radius of Charing Cross. The annual subscription is two guineas, and there are special terms for life membership, which vary with the age of the candidate. Application forms for membership and further particulars may be obtained from the Secretary at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

Public Health AND POOR LAW MEDICAL SERVICES.

TUBERCULOSIS IN MILK.

ORDER OF THE BOARD OF AGRICULTURE.

BY the new Tuberculosis Order, issued recently by the Board of Agriculture to local authorities, which comes into operation on May 1st, the Treasury will refund to local authorities half the net amount payable by way of compensation for animals slaughtered during a period of five years from the coming into operation of the Order.

In a covering letter the Secretary of the Board of Agriculture states that it must be accepted as a fact that tuberculosis is transmissible by the agency of milk used for human consumption.

Any action which results in the reduction in the number of tuberculous bovine animals in the country must reduce the risk of the spread of tuberculosis amongst the community, and if it were possible to eradicate from this country the disease in animals, a material step forward would have been taken in the campaign against the disease in man. It is abundantly clear at the same time, the Board says, that any operations aiming at the diminution or eradication of tuberculosis in animals must be commenced with caution, and carried out with due regard to the extent to which the disease is believed to exist amongst cows, and to the importance of securing the continuance of an adequate milk supply, and of avoiding any disorganization of the important industry concerned. The Order aims at the destruction of every cow found to be suffering from tuberculosis of the udder or to be giving tuberculous milk, as well as of all bovine animals which are suffering from tuberculosis with emaciation. While confining the provisions of the present Order to those forms of tuberculosis only, the Board has not lost sight of the fact that it may be possible in the future to take further action, but believes that heroic measures taken at the present time would only defeat their own object. Every local authority is charged with the duty of investigating reports received under the Order, with the assistance of a veterinary inspector, with a view to causing the slaughter of any animal in its district shown to be suffering from one of these specified forms of tuberculosis, and the veterinary inspector may extend his examination to any bovine animal that has been associated with the suspected animal.

Under Article 5 the local authority is required to cause every animal found to be suffering from tuberculosis to be slaughtered, the animal to be valued in its condition at the time. The compensation payable by the local authority for an animal slaughtered in cases in which the *post-mortem* examination does not show tuberculosis is a sum equal to the full value of the animal, and a further sum of 20s. Where tuberculosis is found the proportion of the value of the animal payable by way of compensation to the owner is made to depend upon the extent of the disease present. If the certificate of the examination shows that the animal was suffering from tuberculosis (not being advanced tuberculosis) the compensation to be paid to the owner is a sum equal to three-fourths of the value of the animal after deducting one-half of the costs of valuation. If the certificate shows that the animal was suffering from advanced tuberculosis, the compensation will be a sum equal to one-fourth of the value of the animal, or a sum of 30s., whichever sum is greater, after deducting from such sum one-half of the costs of valuation and examination. The Order prescribes the precautions to be taken in respect of the milk of suspected animals and their detention and isolation whilst under suspicion.

The Royal Commission on Tuberculosis established that a considerable amount of the tuberculosis in children is of bovine origin. Recent investigations have shown that a very large proportion of the cases of surgical tuberculosis operated on in the Royal Edinburgh Hospital for Sick Children were of bovine origin. It was, therefore, the duty of the Government to realize their responsibilities in this matter. It has now recognized that this form of tuberculosis is preventable, and that the only way to prevent it was by a more thorough system of veterinary inspection of dairy cows, and the slaughter of all those with tuberculosis of the udder as well as those suffering from general tuberculosis. The work of the Royal Commission showed that the latter class of cows were also capable of giving tuberculous milk.

Medical News.

Dr. C. W. Daniels will give a lecture at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., on April 23rd, on insect-carried diseases and their prevention; the chair will be taken by Sir William J. Collins at 5 p.m.

Colonel the Right Hon. J. E. B. Seely, D.S.O., T.D., Secretary of State for War, will present the prizes at the Royal Army Medical College, Grosvenor Road, on the conclusion of the 105th session, on April 29th inst., at 4 p.m.

The President of the Royal Institute of Public Health and Countess Beauchamp will hold a reception at the house of the institute, 37, Russell Square, W.C., on Tuesday, May 6th, from 9 to 12 p.m., when academic dress will be worn.

A course of post-graduate lectures at the Queen's Hospital for Children, Hackney Road, E., began on April 3rd, and will be continued until the middle of June. Further particulars can be obtained from the Honorary Secretary of the Medical Committee at the hospital.

An Almoner, trained by the Hospital Almoners Council, Denison House, 296, Vauxhall Bridge Road, S.W., has been appointed to the out-patient department of the new South London Hospital for Women, which was opened on April 2nd. As the number of patients attending is not likely to be very large to begin with, the Almoner will, for the present, work half-time only.

A dinner of the Brussels Medical Graduates' Association in connexion with the forthcoming congress in Paris of the Royal Institute of Public Health will be held under the Presidency of Dr. Harold S. Sington at the Trocadero, on April 22nd, at 7.30. All graduates of the University of Brussels are welcome, and members are invited to bring ladies. Tickets 5s. (not including wine) may be obtained from the honorary secretary, Dr. Arthur Haydon, 23, Henrietta Street, Cavendish Square, W.

Manifoldia, Limited, of West Bromwich, have placed on the market fitted cabinets for the filing in proper order for convenient reference of medical register cards and daily statistics cards used by medical practitioners working under the Insurance Act. The cabinets are made in various sizes, which are illustrated in an advertisement in this issue. The advantages of the card index method of filing are well known, and these cabinets seem well designed to meet the particular purpose.

The nursing conference which we stated to be in preparation some months ago is to commence next Tuesday and terminate on the following Friday evening, the meeting place being the Technical Institute of the London County Council in Vincent Square, Westminster. The work will be done in two sections—nursing and midwifery. The former section will hold two sessions daily, and in both sections, apart from discussions, addresses in the nature of post-graduate lectures will be delivered by medical men. One of these we note will be an epidiascopic demonstration by Mr. Bishop Harman on the subject of ophthalmia neonatorum. The majority of the sessions, however, will be occupied in discussions on socio-political rather than technical aspects of nursing work and midwifery: for example, the effect of the Insurance Act on nursing, the training of nurses for various special purposes, and the need of State registration and the formation among them of a national association.

The Chadwick lecturer this year is Dr. J. T. C. Nash, County M.O.H. for Norfolk, who chose as the subject of his three addresses the evolution of epidemics. The first dealt with disease in the Middle Ages, it being maintained that bubonic plague was endemic in England for over 300 years before its final extinction after the great outbreak in 1666; it was also suggested that the theory put forward in the sixteenth century to the effect that bubonic plague was caused by a cadaveric poison fitted in with both Pettenkofer's theory of the influence of ground-water fluctuation on epidemic diseases and the most recent rat-infection theories. Incidentally it was also remarked that if the history of medical science were examined two diametrically opposite tendencies would be observed; one of these was to differentiate as distinct affections diseases which previously had been included under one common designation, and the other to determine a persistency of type running through a long series of disorders of various designations. The second lecture dealt with specificity and evolution, more especially in regard to the events of the nineteenth century; while in the concluding lecture will be considered the scientific evidence as to evolution of epidemic disease available at the present time. This lecture will be delivered on Monday, April 21st, being given, like the others, in the rooms of the Royal Society of Medicine.

The good work accomplished by that branch of the National League for Physical Education and Improvement known as the Association of Infant Consultations and Schools for Mothers was manifested in a striking fashion by the competition in mothercraft held at the London County Council's Infants' Schools in Charing Cross Road on April 12th. The movement, started six years ago by Dr. Eric Pritchard, has for its object the instruction of working-class mothers in all that pertains to the care of their children, and the practical lessons of trained lady helpers who have undertaken this part of the work have produced the most gratifying results. The success of this attempt to improve the physique of the rising generation was amply demonstrated by the healthy happy babies who filled the rooms. The eighty-five mothers who took part in the contest represented the winners of competitions previously held at fifteen different London centres, and their efficiency and intelligence showed that the lessons they had received had borne good fruit. Each competitor was required to prove herself capable either of properly dressing, undressing, and tending her child, cutting-out and making or washing his garments, or preparing his food, and prizes and certificates of merit were awarded to the winner of the highest number of marks in each class. The prizes were distributed by Mrs. Boyd Carpenter, and at the close of the proceedings Bishop Boyd Carpenter expressed his appreciation of the work of the association.

It has already been stated in the Journal that Mr. Henry S. Wellcome has for some years been organizing a historical medical exhibition. It will be open at 54, Wigmore Street during the meeting of the International Medical Congress in London next August. Among the large variety of exhibits will be a number of personal relics of Edward Jenner, including the lancets and scarifiers he used in his first experiments on vaccination, his case books and account books, and a large collection of his autograph letters. There will also be exhibited portraits of Jenner and members of his family painted at different periods, and illuminated addresses and medals presented to him. A list of portraits and statues of Jenner, medals, diplomas, honours, addresses, and so forth presented to him, was published in the special Jenner Number of the British Medical Journal which appeared on May 23rd, 1896. Some interesting exhibits relate to the history of anaesthesia. Among these are relics of Sir James Simpson and some of the earliest forms of apparatus for administering chloroform and ether, and the original autograph journal and manuscripts of Mr. Henry Hill Hickman, a forgotten pioneer of anaesthesia, an account of whom was given in the Journal of November 25th, 1911, p. 1434, and April 13th, 1912, p. 843. Persons possessing any objects illustrating the history of medicine and the allied sciences who may be willing to lend them for exhibition are requested to communicate with the Secretary, 54A, Wigmore Street, London, W., who will be pleased to forward a complete illustrated catalogue.

A meeting of the Duty and Discipline Movement, whose object is to combat the ill effects of the lack of discipline in modern homes, was held at the Caxton Hall on April 11th, with Professor Robert Saundby in the chair. A discussion on "Self-development and National Health" was opened by Dr. Eric Pritchard, who said that few people seemed to realize how largely the development of a child's character depended upon the formation of good habits at a very early age. The inculcation of such habits, however, must come from without, since the child would not develop them of his own accord, and hence the importance of bringing up children in an atmosphere favourable to the growth of such qualities as truthfulness, courage, and self-control. There was a tendency amongst parents to neglect their duty in this respect, and the training of future citizens was consequently left almost entirely in the hands of school teachers. In the course of his work as school inspector he had often been struck by the want of control of parents over their own children, who, though perfectly amenable to discipline during school hours, became absolutely uncontrollable directly they crossed the threshold of their homes. Mr. Alfred Tredgold said that the Duty and Discipline Movement was intended to counteract the deplorable results of the modern craving for ease and pleasure. Everything about the present age discouraged the fostering of such old-fashioned virtues as thrift and industry; and the breakdown of the Territorial scheme showed to what a pitch the love of comfort had risen amongst the youth of the country.

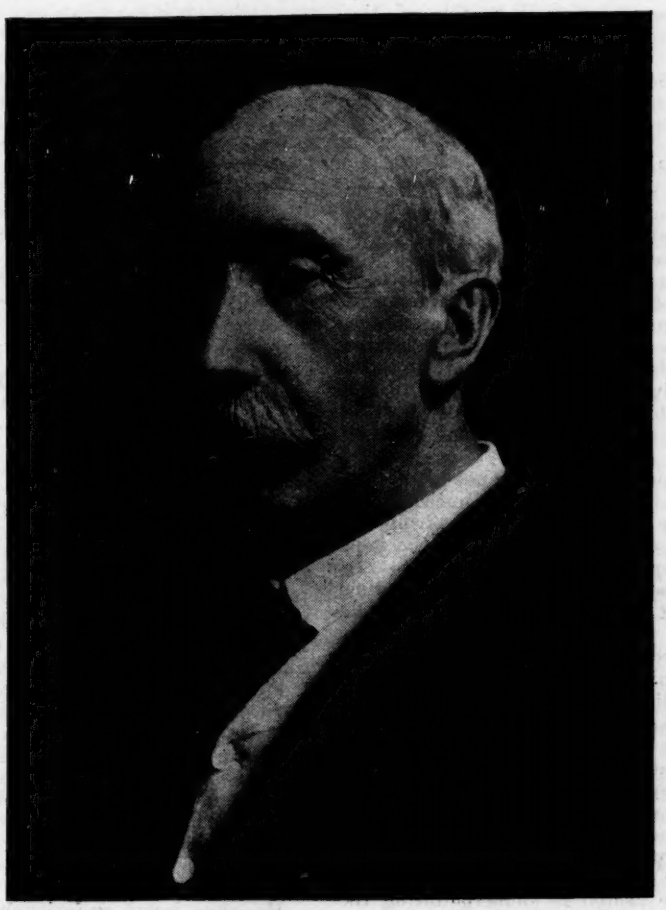
Obituary.

SIR HENRY R. SWANZY,

SURGEON TO THE ROYAL VICTORIA EYE AND EAR HOSPITAL, AND OPHTHALMIC SURGEON TO THE ADELAIDE HOSPITAL, DUBLIN.

WE regret to announce that Sir Henry R. Swanzy died, after a brief illness, at his residence, in Dublin, on the evening of April 12th.

Henry Swanzy was a son of the late John Swanzy, a Freeman of Dublin, and was born in 1844. He was educated at Trinity College, Dublin, and graduated M.B. in 1865. He obtained the L.R.C.S. in the following year. He then went abroad and spent several years in study at the Universities of Berlin and Vienna, and was assistant to the late Professor von Graefe at his private ophthalmic hospital in Berlin. He acted as surgeon in the Prussian army during the campaign of 1866. He then returned to Dublin, and practised as a specialist in ophthalmology. In 1873 he became a Fellow of the Royal College of Surgeons in Ireland, and an M.A. of Dublin University. In 1888 he delivered the Bowman Lecturer before the Ophthalmological Society of the United Kingdom, taking as his subject the value of eye symptoms in the localization of cerebral disease. From 1897 to 1899 he was President of the society. From 1906 to 1908 he was President of the Royal College of Surgeons in Ireland. In 1905 he was granted the M.D. degree (honoris causâ) in the Dublin University. He was also an Honorary D.Sc. of the University of Sheffield. In 1911 he received the greatest honour that the ophthalmologists of the world could bestow, when he was selected for the post of President of the Ophthalmological Section of the International Congress of Medicine to be held in London next August. He was the author of a *Handbook of Diseases of the Eye and their Treatment*, which for many years was a standard textbook, and was recently published in an enlarged form under joint authorship. He also wrote the article on "Eye Diseases and Eye Symptoms in their Relation to Organic Disease of the Brain and Spinal Cord," in the *System of Diseases of the Eye*, published in 1900, and contributed numerous important articles to the *Transactions* of the Ophthalmological Society and to the medical journals.



Photograph by] SIR HENRY R. SWANZY. *[Elliott and Fry, Ltd.*

Sir Henry Swanzy was surgeon to the Royal Victoria Eye and Ear Hospital, and to his exertions is largely due the erection of the present hospital, though he has not lived to see the original plans of the building completed. Sir Henry Swanzy as a man was respected by all, but his real character was only known to his intimate friends; behind a veil of modesty and shyness, which was apt to give the impression of brusqueness to those who did not know him well, was a rich sense of humour, a warm heart, and a great charity, always ready in private life to find excuses for those who failed.

The writer of this notice can vouch for the truth of the following story, which was typical of the man. A medical student who went to consult him about his eyes asked him his fee. Sir Henry said, "Nothing; dog don't eat dog." "Oh," said the student, "I'm not qualified yet; I am only a student." Sir Henry's reply was, "Neither does dog eat puppy." In public debate Sir Henry was unsparing and scathing to any whom he suspected of humbug and dishonesty of purpose, but with the honest striver, however inefficient, his patience was inexhaustible. His death will leave for long a blank, both in the profession and among his friends, that will be hard to fill.

Mr. PRIESTLEY SMITH, Emeritus Professor of Ophthalmology in the University of Birmingham, writes:

The news of the death of Sir Henry Swanzy, which reached me this afternoon, fills me with a sense of heavy personal loss. For very many years he has been not only a leader among British ophthalmic surgeons, but, to those of us who knew him well, a highly valued friend. He belonged thoroughly to the present, but was a link with a distant past, for he had worked with von Graefe in Berlin. At the meeting of the British Medical Association in Cambridge in 1880, when Bowman and Donders received honorary degrees, Swanzy was there, I think, as a vice-president in our Section, already a man of grave and dignified appearance; and until quite lately he has been a frequent and active participator at meetings and congresses in this country and abroad. Time seemed to change him wonderfully little—always the same dignity with modesty, kindliness, and humour. He threw himself with boundless energy into all that he undertook. No one who was present will forget his earnest, yet humorous, appeal to the members of the Ophthalmological Society when a change in its constitution was under consideration. A busy man no longer young, he came from Dublin to speak and vote on a matter which was very near his heart, though of no importance to him personally, starting on his return journey a few minutes after having done so. I will not speak of his scientific eminence, of the great work which he did for his hospital, or of the high official positions which he had held and was still to hold. At this moment one thinks rather of his genial presence, of the delight of many meetings with him in the past, of his acts of friendship, and of the blank which his removal will leave among us.

Sir ANDERSON CRITCHETT, Bart. (London), writes:

A fraternal friendship had existed between Sir Henry Swanzy and myself for nearly forty years, and I cannot yet realize to the full the extent of the heavy loss which I have sustained.

"The old order changeth, yielding place to new," and his death breaks one of the few remaining links which connect us with the days of Donders, Bowman, my father, and von Graefe. He acted for some months as

assistant to the last named in Berlin, and he greatly valued his association with that remarkable genius, whose memory he held in lasting and profound veneration.

It was impossible to know Swanzy without loving him, for, with the highest qualities of intellect and of character, he combined a warmth of heart and a store of genial wit which attracted and held fast all who came within the range of his friendship.

He published one of the most excellent handbooks extant on diseases of the eye; it passed through many editions and is still in deservedly high favour; and the "Bowman lecture" which he delivered in 1888 has always taken rank as one of the best in that brilliant series, for it combined originality of thought and expression with diligent and successful research. He was ever an eloquent and a convincing speaker. Sir Henry Swanzy achieved the highest professional honours to which an ophthalmic surgeon can aspire, for he had been President of the Ophthalmological Society of the United Kingdom, and he was President-elect of the Ophthalmic Section of the International Medical Congress which is to be held in London next August.

"After life's fitful fever he sleeps well"; but our warmest sympathy will go out to the surviving daughters who mourn their irreparable loss.

Mr. J. B. LAWFORD (London) writes:

The death of Sir Henry Swanzy removes a well-known and striking personality from the ranks of our profession. One of the *doyens* of British ophthalmology Swanzy was widely known and as widely respected, and many of his colleagues and pupils were attached to him by ties which were closer than those of mere friendship. A man of decided character and strong views, which he was well able to maintain, his courtesy and charming manner were obvious to all who came into contact with him; to those who knew him intimately Sir Henry exhibited all the warmth and cordiality of his Celtic nature. As a host he was altogether delightful, and as a guest no one could be more pleasant.

No words of mine are necessary to enhance his professional reputation, earned by many years of untiring diligence. I have had many opportunities of admiring the thoroughness with which, during his later years, he kept abreast of modern developments in ophthalmology. In this he was greatly helped by his knowledge of other tongues, and especially of German, in which language he was proficient.

Rather more than two years ago Sir Henry was chosen as President of the Section of Ophthalmology of the forthcoming International Medical Congress, a selection which was a source of much satisfaction to ophthalmologists abroad, to many of whom he was personally known, and not a few of whom counted him an intimate friend. He accepted this office with considerable reluctance, and told me he was doubtful if he was physically fit for the labour it would entail. Having accepted office, he devoted much time and energy to the arrangements for the Section over which he was to preside and in which he took a keen interest. Last August he visited Heidelberg during the meeting of the Ophthalmologische Gesellschaft, and addressed the assembly, extending to the members a hearty invitation to the Congress on behalf of himself and his colleagues in this country. This year he had made all arrangements to go to Paris in May during the meeting of the Société d'Ophtalmologie Française with a view of furthering the interests of the Congress. His death, occurring so near the date of the Congress, is an irreparable loss to the Section of Ophthalmology.

TWO MEDICAL MISSIONARIES TO CHINA.

CECIL FREDERICK ROBERTSON, M.B., B.S.Lond., F.R.C.S.Eng.

DR. CECIL ROBERTSON, whose death from typhus fever took place at Sian Fu, Shensi, North China, on March 16th, was one of the capable young medical men who have recently joined the ranks of the Baptist Missionary Society. He was a student at Middlesex Hospital, and took the degrees of M.B., B.S.Lond. in 1907, and in 1909 he became F.R.C.S.Eng. He held the posts of house-physician and house-surgeon at the Middlesex Hospital, the latter appointment under Sir Alfred Pearce Gould. In October, 1909, he went out to China as the colleague of Dr. Stanley Jenkins, and was stationed at Sian Fu, the capital of the province of Shensi, in North China.

When Dr. Jenkins came home on furlough in 1911 Dr. Robertson took charge of the hospital, and almost immediately after he was called to play a part in mitigating the horrors of the revolution, which in that part nearly resulted in the massacre of the missionaries, and did actually lead to terrible slaughter among the Manchus; some 15,000 were killed in Sian Fu on October 22nd and their heads were exposed on the city walls. The presence of Dr. Robertson in the city was one of the most important factors in the situation, for doctors were wanted, and Dr. Robertson was requested to go to the place where fighting was taking place and organize the ambulance department. Through scenes of the utmost horror Dr. Robertson worked with enthusiasm and skill, performing many operations when permitted to do so, though often the prejudices of the people hindered his work. After this he was called upon to operate on a brother medical missionary —Dr. Young—for appendicitis; the operation was successful.

All this work gained for him and his colleagues the gratitude of the Chinese authorities, which was shown by the presentation to him by the army of a tablet containing a laudatory address, and a red silk umbrella by the people.

A few days before his death he went a six days' ride to attend the sick child of a missionary; on his return he contracted typhus fever and died.

He was a manly Christian, and endeared himself not only to his fellow missionaries but the Chinese, and his funeral was attended by Chinese soldiers and officials.

HERBERT STANLEY JENKINS, M.D.Lond., F.R.C.S.Eng.

DR. STANLEY JENKINS died of typhus fever on April 6th, no doubt as a result of attending his junior colleague, Dr. Robertson. Dr. Jenkins was a distinguished student of the Bristol Medical School, where he won several prizes and scholarships, including a gold medal. He took the diplomas of M.R.C.S. and L.R.C.P. in 1898, the degrees of M.B., B.S.Lond. in 1901, and that of M.D.Lond. in 1903; he took the F.R.C.S.Eng. the same year.

He was not only well qualified as a medical man, but he was a leader in the Student Christian movement at Bristol; an appreciation appended from his friend, Dr. G. Basil Price, indicates the influence which he exerted. Like many another medical missionary, he exercised a great influence on boys amongst whom he worked.

For several years he held resident posts at Bristol and at St. Mark's Hospital, London. His most important work was done at the Mount Vernon Hospital, where he acted as registrar and pathologist. He wrote a report on Open-air Treatment of Consumption, published in 1901.

He went out to China under the Baptist Missionary Society in 1904 to Sian Fu in Shensi, North China. There he took charge of the medical mission work, and soon became its leader, and was greatly beloved by the Chinese.

He came home on furlough in 1911, and it was during his absence from China that the revolution occurred which has been described in the notes on Dr. Robertson's career. Whilst on furlough he did some post-graduate work in public health, but returned rather earlier than had been contemplated owing to the great strain which had come upon his colleagues. He reached China again at the end of 1912, only four months before his death.

Dr. Jenkins married the daughter of Mr. and Mrs. Thomas Loveridge of Llandaff, and his wife and children were at the coast when he was taken ill. She was able to take the two-weeks' journey to Sian Fu in time to assist in nursing him on his deathbed.

The loss of Dr. Jenkins is keenly felt not only by the Baptist Missionary Society, but by a wide circle of missionary friends. He was a thoughtful, cultured man of sterling character, unselfish to the core, and his place will be hard to fill.

Dr. G. BASIL PRICE writes:

I first knew him as a school friend and afterwards at University College, Bristol, and though our friendship has only at long intervals had opportunity of being renewed, owing to his sphere of work being in China, I have never

lost the sense of personal attraction and sincere regard which he ever evoked in those who knew him.

He was to my mind an ideal medical missionary—ever imbued with the thought that his medical acumen, skill, and qualifications must be a proof, if such were needed, of his Christian spirit and work; for that reason he would not volunteer for his work abroad until he had taken the M.D.Lond. and F.R.C.S.Eng., besides holding important resident appointments.

His scientific qualifications did not spoil the missionary, but were to him weapons for that spiritual warfare in China for which he laid down his life. It will be for others to write from more intimate knowledge of his great, though all too brief, work in the land of his adoption. What will ever remain with me to his memory is the thought of his gracious, sympathetic spirit which lay behind all he did and said, and that never allowed his great personal gifts to obtrude themselves. He was in the highest sense a Christian gentleman, with enthusiastic love for his fellow-men and for his Master. A student leader in his earlier days, he became a devoted worker and leader amongst the Chinese, and had, as we hoped, a long life of untold influence before him.

Stanley Jenkins was one whose name will long remain fragrant with those who knew him, and whose influence has contributed to mould the destiny of that ancient though now young nation. His life and his death was that of the soldier who sought the battlefield and was ever ready to lay down his life, if need be, for the people he loved. Equally true might it be said of him as was said of Dr. Jackson by the Chinese Viceroy: "In life you were brave, now you are an exalted spirit. Noble spirit, who sacrificed your life for us, help us still, and look in kindness upon us all." Our keen sympathy will be freely given to his stricken wife and large family circle.

JOHN ROBERTS, M.D.EDIN., M.R.C.S.ENG.,

FORMERLY PRESIDENT OF THE NORTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

WE regret to announce the death of Dr. John Roberts, of Menai Bridge, Anglesey, on March 16th. He was born at Crug, Carnarvonshire, in 1837, and studied at the University of Edinburgh, University College, London, and later in Paris. He took the diploma of M.R.C.S.Eng. in 1859 and the degree of M.D.Edinburgh in 1861. Shortly afterwards he was appointed house-surgeon at the Royal Maternity Hospital, Edinburgh. He started practice in Manchester, and was a contemporary of Dr. Thorburn, Dr. Cullingworth, Dr. Dreschfeld, and Mr. Tom Jones. He was consulting physician to the Southern Hospital for Diseases of Women and Children, president of the Manchester Ethical Association, and honorary secretary of the Manchester and Salford Sanitary Association. He remained in Manchester for some years, where he developed a very successful practice, and was strongly advised by Sir William Roberts to remove to London. The delicate health of his wife, however, decided him to retire to Menai Bridge, Anglesey, in 1885, where he practised chiefly as a consultant.

As a man of high professional repute, and one who realized to the utmost the ideals and responsibilities of his vocation, he became widely known in North Wales. If there were any need of evidence as to the great esteem and affection—we might say veneration—in which the late Dr. John Roberts of Menai Bridge was held, it was amply shown by the large attendance at his funeral on March 19th, when, at the service at the chapel he had for so many years been a regular attendant, all the public bodies on which he had served were represented, besides many friends from a distance, and the medical men of the county. All bore witness to the loss of a common friend, of a highly gifted and eminently upright man, who had devoted a long life unceasingly, energetically, and in the best spirit to the interest of the medical profession and his adopted county. He combined in a high degree the qualities of accuracy, precision, truthfulness, and conscientiousness. He added to these qualities a kindly and friendly disposition, which grew with advancing years, and a high, dignified bearing, which never deserted him. He was recognized to be an accomplished physician; conscientiously accurate in investigation, careful in diagnosis, shrewd in estimation of character, and judicious in treatment, leaving no detail uncared for. Decided, yet kind and considerate, he won the confidence of practitioners and patients. In general politics he was a Liberal, and during his lifetime served the county in various ways. He was one of the first aldermen elected by the County Council, was a magistrate since 1886, and a member of the Board of Guardians, the chairman of which, in proposing a vote of sympathy with the family, said that Dr. Roberts was a man of affairs, sound in judgement, kindly of heart, who was ever ready with his advice when sought.

He took great interest in the Nursing Association of the county, of which he was honorary treasurer for seventeen years.

Dr. Roberts's loss will be seriously felt throughout the county, for few men were more public-spirited and more honest and outspoken in the discharge of duty, and it may be truly said that those who knew him best loved him most.

He leaves four daughters (one of whom is a member of the medical profession) to mourn the loss of a kind and considerate father.

CECIL E. SHAW, M.A., M.D., M.CH.,

LECTURER ON OPHTHALMOLOGY IN THE QUEEN'S UNIVERSITY, BELFAST.

IT was with deep regret that the intimation of the death of Dr. Cecil Shaw, which took place on April 10th at his residence in Belfast, was received throughout Ulster. His health had been indifferent for some years, but after a visit to Kissingen in 1910 he improved considerably, and many of his numerous friends hoped that he was permanently restored to good health, but pernicious anaemia became evident, and he was compelled to go away again in 1911 and in 1912. Despite his weakness he stuck manfully to his duties, and gave his last lecture of the winter session some nine weeks before the end.

Dr. Shaw was the youngest son of the late Rev. George Shaw, Presbyterian minister of Belfast, and was in his 50th year. He received an excellent education in the Royal Academical Institution, Belfast, and then entered the Queen's College, Belfast, where he pursued the arts course, and obtained the B.A. degree with honours in experimental science in 1883, and the M.A. in 1885. As he had already entered the medical curriculum, he was enabled to obtain the degree of M.D. in 1887. He at once began to specialize in ophthalmic, throat, and aural work, and became clinical assistant in Moorfields Ophthalmic Hospital, and at Golden Square Throat Hospital; he also studied at Paris, Marburg, and Vienna. Settling in Belfast, he confined himself practically from the first to his specialities, in which he soon made a name, and had just reached his zenith when his tragic illness began to cross the path of success. Dr. Shaw held many appointments: he was ophthalmic surgeon, and subsequently consulting ophthalmic surgeon, to the Mater Infirmorum Hospital; assistant surgeon to the Belfast Ophthalmic Hospital, where he gave valuable aid to his senior, Dr. J. Walton Browne, in renovating the hospital and bringing it thoroughly up to date; ophthalmic surgeon, and subsequently consulting ophthalmic surgeon, to the Ulster Hospital for Children; consulting oculist to the County Antrim Infirmary and to the Ballymena Cottage Hospital; honorary laryngeal surgeon to the Forster Green Hospital for Consumption. In his earlier days he wrote a small textbook on external diseases of the eye, and from time to time made several contributions to the medical journals on his specialities; he joined in the discussions at the meetings of the British Medical Association, and at the meetings of the various special societies and congresses. He was a member of council of the Ophthalmic Society.

Dr. Shaw was a Fellow of the Ulster Medical Society, and took the greatest interest in its proceedings and in the British Medical Association; he was for many years on the Council of the former, and had held the office of vice-president. He was also one of the original trustees of the Medical Institute. But perhaps his chief interest lay in the British Medical Association. As he had numerous friends and connexions in England, he had a double pleasure in the visits to London necessitated by holding office. His untiring efforts as secretary during the visit of the Association to Belfast will long be remembered, and are still green in the grateful recollection

of his fellow members. The great amount of work he did for the British Medical Association may be gauged from the following list of the offices he held: Member of the council of the Ulster Branch 1901 to 1907; honorary secretary Ulster Branch 1905 to 1910; member of the Central Council 1904 to 1909; member of the Science Committee 1906 to 1910; vice-president of the Section of Laryngology and Otology at the annual meeting in Oxford in 1904, and of the Section of Ophthalmology at the annual meeting in London in 1910; secretary of the annual meeting of the Association at Belfast in 1909; representative of the Ulster Branch on the Irish Committee 1909 to 1911.

No notice of Dr. Shaw's life would be at all complete without mention of his numerous parerga. He was one of the best amateur photographers, and his early training in experimental science enabled him to bring to the art advanced scientific knowledge. A good camera was a constant companion on holiday, and not infrequently on professional journeys; and in the following winter a lecture, illustrated with his own slides, pleased and instructed those not so fortunate as himself in seeing the beautiful and interesting spots of the world; he also did some photomicrographic and colour photographic work. Books were an ever fresh source of pleasure, and to those whom he knew to share his tastes, his first question after the business of the interview not infrequently was, "Well, what have you been reading lately?" He read with intelligence and care, chiefly books connected with travel, but there were few subjects he could not talk on and illuminate with his knowledge; of poets he was a follower and student of Browning. He took a great interest in the Belfast Library and Society for Promoting Knowledge.

Dr. Shaw was married but had no family. The deepest sympathy is felt with his widow, who was the devoted companion in all his work and his holidays, and the untiring nurse in his long and trying illness, and also with his sisters.

GEORGE BRUCE MACDONALD, M.D., J.P., L.R.C.S.E.

We regret to record the death, in his 72nd year, of Dr. George Bruce MacDonald, which occurred, after a short illness, at his residence at Shepperton-on-Thames, Middlesex, on April 8th. He was descended from the old historic family of The MacDonalds of the Isles, which numbered the famous Flora MacDonald amongst its members, and was educated at Glasgow University, where, after a successful course, he graduated M.D. with honours exactly half a century ago. He took the diploma of L.R.C.S.Edin. in the same year (1863).

After some little time spent as an assistant, he "cam sooth," and settled at Southall Green, Middlesex, then a purely agricultural district, "ten miles from town," where he built up a large and widespread family practice. Here he was appointed district medical officer for Norwood parish, and in the course of time came to hold many other medical appointments, which he filled to the entire satisfaction of all concerned. Amongst them were: Divisional surgeon of Metropolitan Police, certifying factory surgeon, medical officer to the Brentford Gasworks and Great Western Railway works, and medical attendant St. Marylebone Schools, the Central London Schools, Southall, and St. Mary's Orphanage, North Hyde. On his well-earned retirement from active practice, some seven years ago, he was placed on the Commission of the Peace for Middlesex, and was a regular attendant on the local petty sessions bench at Brentford, as well as at Quarter Sessions, Westminster.

He went to reside at Shepperton, but his heart remained in Southall, and three years ago, such was the esteem in which he was held there, that he was unanimously requested to allow himself to be nominated for the electoral division of Southall-Norwood as its representative on the Middlesex County Council, an honour which was repeated as recently as a month ago. He was most assiduous in attending to his duties as a councillor, serving on the Public Health, Asylums, Reformatory Schools, and Education Committees. He was one of the two medical members elected to serve on the Insurance Committee, but, like his colleague, out of loyalty to his professional brethren, he declined to serve. On committees his views and opinions were always received with the deference due to his wide knowledge and long professional experience. He attended as a member of the Visiting Committee at the Middlesex County Asylum, Wandsworth, as recently as March 29th, in excellent health and spirits; so it may be said he died in harness, for a few days later he took cold, pneumonia supervened, and he passed away regretted by all.

A thoroughly practical and busy man, Dr. MacDonald had little leisure to record his manifold experiences, nor was he much of a talker, but it was always a pleasure to listen to him, as he gave advice, derived from his stores of knowledge, often illustrated by an apt quotation or appropriate story. A kindly, big-hearted Scot, he will be greatly missed in the western parts of Middlesex by rich and poor alike, amongst whom he laboured so long and so self-sacrificingly.

GEORGE TEMPLETON, M.B., C.M., F.R.C.S., LONDON.

It was with feelings of consternation that the news of the disappearance of Mr. George Templeton during a skiing expedition in Norway on March 27th was received by his friends, and though for a day or two hope was entertained that his robust frame and determination of character would have enabled him to weather the storm in which he was overwhelmed, that hope was ultimately extinguished by the discovery of his body a week afterwards when the blizzard had moderated sufficiently to make systematic search possible. Mr. Templeton had been staying at Finse, between Bergen and Christiania, and had set out with five other men at about 11 a.m. to visit a hut about nine miles off, a journey which is usually accomplished in favourable circumstances on ski in about three hours. Owing, however, to the onset of a snowstorm and the severe cold, and also, no doubt, to the fact that several of the party were inexperienced in the use of ski, it was not until 4.15 that the hut was reached. At 5 p.m. the party started to return, with Mr. Templeton leading, and ordinarily two hours suffice for the journey. The others seem to have had some difficulty in keeping up the pace, but at the top of the first big hill a halt was made to allow of the arrival of the stragglers. Here Mr. Templeton and Mr. Warren moved ahead, and were never seen again, and it was not until 11 p.m. that the remaining four reached a signalman's hut five miles from Finse in a very exhausted condition. The telephone here revealed the fact that Mr. Templeton and his companion had not reached the hotel, and, though a search party was at once organized, their efforts were unavailing.

Mr. Templeton, who was born in Kilmarnock in 1869, graduated M.B., C.M. with honours at the University of Edinburgh in 1892, and took the diplomas of M.R.C.S. and L.R.C.P. in the same year. He took the diploma of F.R.C.S.Eng. in 1896. He was house-physician at the Royal Free Hospital, and subsequently became Surgical Registrar to the Hospital for Sick Children, Great Ormond Street—a post which he occupied for three years. For the next twelve years he was surgeon to the North-West London Hospital. As consulting surgeon to the Hostel of God, Clapham Common, and to Hornsey Hospital he did good work, but of late years it was chiefly in connexion with S. Barnabas's Home, Lloyd Street, that he found an outlet for his abilities.

Mr. Templeton was the embodiment of an energy which might almost be described as Titanic, and it was this which contributed to his undoing. "We did not start back until nearly 5. Dr. Templeton at once took the lead, and I kept near him to keep him in sight. I managed to keep him back a bit until about 6.30, but he got impatient at the slowness of the rest and went on, and Warren followed him. I refused to leave the others."

Such is part of the narrative of one of the survivors—Mr. Henry Green. Mr. Templeton possessed the faculty of getting at the heart of a thing rapidly and almost intuitively. In his work he was bold, original, dextrous, and successful, and his self-reliance was so great as to amount at times almost to a fault. His other interests were numerous and varied, and on all of them he brought to bear a concentration of purpose which made light of obstacles. In his private life he was courteous and kindly, and his untimely loss will long be felt by those who were privileged to be numbered among his friends.

THE LATE MR. JORDAN LLOYD.

DR. OTTO J. KAUFFMANN, Physician to the Queen's Hospital, Birmingham, who was absent from England at the time of Mr. Jordan Lloyd's death, has sent us the following personal appreciation, which will be read with interest by many of Mr. Jordan Lloyd's friends and former pupils:

I should take it as a favour to be allowed to say a few words in appreciation of Jordan Lloyd, reasons of which, the Editor is informed, have prevented my writing earlier.

For twenty years I have shared rooms with Lloyd, and we have met almost daily during that period and have exchanged opinions on matters of common interest. So one becomes well acquainted, and although in the case of most men such an intimacy would allow one to make a fair guess at their judgement on some matter of general interest, it was different with Lloyd, whose point of view of a subject was always original and uncommon, allowing him to see further than most of us can. The subject considered from his standpoint always presented a novel aspect, very usually convincing when it was made clear, and discussion with him was extraordinarily refreshing. Everything interested him, not only his professional work and speculations in pathology based on his observations, but life in whichever phase or form it came before him. Most particularly he was fascinated with the "pathology of the living," and on the phenomena which had come under his watchful attention in the operating theatre he would discourse with enthusiasm and from them would draw wonderfully correct and ingenious conclusions.

Of his great skill as an operator others have spoken. I would say a word on his judgement and reserve in holding his hand unless he was convinced that an operation would do good to the patient. For clinical judgement, especially concerning this last point, it was difficult to find his equal. Jordan Lloyd was a lovable man—strong, tender, and sympathetic, and free from all petty jealousy and envy. Scores of times we have discussed the acts of colleagues, or the attitude on some point of discussion, medical or general, of another member of the profession, and I was always impressed with the fact that he never belittled another's ability, and never questioned the fairness of his intentions; and invariably he had a good word to say for the honest effort, and an appreciation for the success, of another. A more generous-minded man it is impossible to conceive.

THE LATE DR. ROBERT FLETCHER.

WE have received a reprint from the *Bristol Medico-Chirurgical Journal* of December, 1912, of an obituary notice by Sir William Osler of the late Dr. Robert Fletcher, whose name is well known in connexion with the *Index Catalogue of the Surgeon-General's Library* at Washington and the *Index Medicus*. As was stated in a brief notice of his life published last December, he was born in Bristol in 1823. He entered the medical school of that city in 1839, and passed the "College and Hall" in 1844. In 1847 he migrated to the United States and settled in Cincinnati, where he practised for some years; at the outbreak of the civil war he volunteered as a medical officer, and at the end of it was given the rank of Brevet Colonel for faithful and meritorious service. His connexion with the Surgeon-General's Library began in 1876, and ended only with his life. He was one of the principal editors of the *Index Catalogue*, and his services were handsomely acknowledged by Dr. Billings in the preface to the first volume published in 1880. Of the magnitude of that undertaking an idea may be formed from the following facts given by Sir William Osler:

> In the first series of sixteen volumes, completed in 1895, there were indexed of author titles 85,663 volumes and 151,504 pamphlets, and of subject titles 168,557 books and 511,112 journal articles. Of the second series sixteen volumes have already been issued, nearly finishing the letter "S." The thirty-two volumes so far published furnish a medical reference catalogue of colossal proportions—of 286,255 book titles and 1,006,355 journal articles. Each volume contains nearly a thousand pages, closely printed, with from fifty to seventy-five separate references on each.

With the *Index Medicus* Fletcher was associated as co-editor for twenty-one years and as editor-in-chief for nine. He also lectured for some years on medical jurisprudence at the Washington University. Afterwards he lectured on the same subject with much acceptance at the Johns Hopkins Hospital Medical School. Outside his bibliographical work he was specially interested in anthropology, and contributed largely to the two volumes of *Anthropometrical Statistics*, issued from the American War Department in 1875. He was a man of versatile mind, and his range of intellectual interests was unusually wide. Among his writings are a monograph on Prehistoric Trephining and Cranial Amulets (1882); Human Proportion in Art and Anthropometry, and Tattooing amongst Civilized Peoples (1883); Myths of the Robin Red-breast in Early English Poetry (1889); the New School of Criminal Anthropology (1891); Anatomy and Art (1895); and Scopelism (1897), the first paper on the subject in English. To the Johns Hopkins Historical Society he contributed a number of valuable papers, among them being essays on Medical Lore in the older English Dramatists and Poets (1895); the Witches' Pharmacopoeia (1896); and A Tragedy of the Great Plague at Milan in 1630 (1895). The reprint includes an interesting paper by Fletcher on some diseases bearing names of saints. It shows abundant evidence of the painstaking research characteristic of him, but is disfigured by such an error as *feu sacrée* (St. Anthony's fire), which occurs about half a dozen times. He worked on in spite of illness to the end, reading proofs to within a few days of his death. He was a man of fine character, and his vast acquaintance with members of the medical profession, ranging from Astley Cooper to the leading men of the present day, made him an entertaining companion. He was very far from being the dryasdust one is apt to assume that men who spend their lives among books must be. A man of immense learning, he did not carry the dust of the library into social intercourse. Sir William Osler says:

> It was a rare treat to dine quietly with him at his club in Washington. "He knew his Brillat-Savarin well, and could order a dinner that would have made the mouth of Coelius Apicius to water."

The reprint has an excellent portrait of Fletcher as a frontispiece.

DR. CHARLES TOZER SAVORY, who had reached the ripe age of 83, died on March 27th at his residence in Crouch End, where he had lived since his retirement from practice some eight years ago. The active portion of his life was spent in Stoke Newington and Canonbury, where he was in partnership with an old fellow student, the late Mr. William Pettifer. Dr. Savory, who became M.R.C.S., L.S.A. in 1862, and M.D.St. Andrews somewhat later on in the same year, was born in Monument Yard, in the City of London, in 1829, his father being William Henry Savory, a surgeon long resident in the parish of St. Mary-at-Hill. Charles Tozer Savory was thus a younger brother of the Savory who was destined to attain such fame as a surgeon, the late Sir William Scovell Savory. On completion of his general education at Ramsgate he entered on a commercial career, but at the age of 30 abandoned it in favour of medicine, and joined St. Bartholomew's Hospital as a student in 1859, the same year as that in which his brother received the honour of being appointed to succeed Sir James Paget as lecturer on general anatomy and physiology. It was a somewhat curious position, for in age the two brothers were only three years apart. Charles Tozer Savory, however, never had any cause to regret his late choice of medicine, for, though he never attained fame, he proved a successful general practitioner. In many respects he was by no means unlike his brother. He had the same handsome, dignified presence, and evidenced ability of the same order as that which gained for Sir William Savory almost as high a reputation on the platform and in the lecture-room as in the wards and operating theatre. A genial man, of wide reading and culture, Dr. Charles Tozer Savory's polished and witty conversation made him a very attractive host; in addition he was of charitable disposition, and entirely free from any tendency towards ostentation. Another marked characteristic in him was a great love of animals. Dr. Savory was twice married, and had a large family.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

ANSWERS.

HYPERTROPHIED PROSTATE.

DR. JOSEPH S. BOLTON (Nottingham) writes: For enlarged prostate high frequency currents applied by a rectal electrode have proved useful Dr. M. M. SHARPE (London) writes to the same effect, but adds that a special form of condenser electrode is necessary.

COUNTRY MEMBER suggests that "X. X." should feed his patient on the prostate glands of bullocks. These should be lightly cooked by steaming, and the gland substance and gravy be taken with the principal meal of the day.

SCOPOLAMINE-MORPHINE IN EXOPHTHALMIC GOITRE.

SUSSEX.—The scopolamine and morphine combination is a most excellent hypnotic in cases of exophthalmic goitre, so much so that it is frequently used as a preliminary to general anaesthesia in patients suffering from this disease. It would certainly be safer than chloroform, which undoubtedly in these circumstances is dangerous. There is no evidence that pregnancy would lessen this risk. Should the degree of narcosis obtained by an average dose—say, morphine gr. $\frac{1}{3}$ and scopolamine gr. $\frac{1}{100}$—be insufficient, a little ether inhaled from a few thicknesses of gauze clipped into a wire frame would produce the required depth of analgesia without danger.

TREATMENT OF GOITRE BY IODINE ABSORPTION FROM THE SKIN.

DR. PETER TYTLER (Manchester) writes, with reference to the inquiry of Major Lawson in the BRITISH MEDICAL JOURNAL for March 29th, to state that for the last five years he has used the following method in the treatment of goitre: A piece of lint large enough to cover the growth and the skin for 3 in. or 4 in. beyond is soaked in a lotion consisting of 1 drachm of iodine tincture in 8 oz. of water and applied to the neck at bedtime and left on till morning. If a stronger solution is used it produces inflammatory reaction and prevents absorption. Dr. Tytler states that he has employed this plan in many cases but that only three have continued long enough to produce a satisfactory result. They were all young men, aged 18 years and upwards. Two were out-patients, and over two years elapsed before the swelling materially diminished. In the one private patient the swelling was reduced 2 in. in eight months. The difficulty, he finds, is to get patients to persevere with the treatment.

INTERMITTENT GLYCOSURIA.

DR. P. J. CAMMIDGE (London) writes: If Dr. Thomas will refer to my recently-published book on *Glycosuria and Allied Conditions* he will see that the condition met with in his patient is well recognized and is not uncommon in mild cases of glycosuria. In these "the sugar excretion increases after food, usually reaching a maximum two or three hours after a meal, and diminishes during fasting, so that the urine passed in the early morning, before breakfast, may be sugar free" (p. 180). In this particular instance the infection of the bladder with coliform organisms is probably a contributory factor in producing the sugar-free condition of the urine that has collected in the bladder over-night, for in the process of their growth they decompose the sugar, giving rise to various acids and gases. The former tend to set up cystitis, while the latter give rise to the condition known as pneumaturia (p. 259). It is the acids formed in a similar way in the urine adherent to the external genitals that cause the pruritis, etc., from which many diabetics, and especially women, suffer. Sugar in the urine always denotes a disturbance in the metabolism of the body, and is not formed locally in the bladder, etc., by bacterial or other means under any circumstances.

TREATMENT OF RHEUMATOID ARTHRITIS.

DR. W. J. MIDELTON (Bournemouth) writes: Your correspondent "H. E. J." (BRITISH MEDICAL JOURNAL, March 29th, 1913, p. 696) does not mention which form of continuous counter irritation he would like information on. I have during the past twelve years treated many cases of arthritis deformans by such means. I have used three methods: The blister followed by savin ointment, acupuncture and irritants, and the galvano-cautery. Either singly, any two, or all three may be employed on the same patient according to the needs of each case. I have notes of hundreds of cases treated by myself or friends, and the majority are as striking as those quoted in the the JOURNAL of January 25th, 1913, p. 162. I have selected three at random: (1) Female, aged 46. Mother died a cripple from "rheumatism." Patient had suffered over nine years herself, gradually increasing weakness. Knees chiefly affected, most other joints as well. In bed quite helpless when seen by me, in much pain generally. Treated vigorously by pyonex method. Within three months could walk three miles. (2) Female aged 55. All joints stiff, painful, and swollen. Travelled to Bournemouth with difficulty, accompanied by a nurse; just able to walk with crutches. Duration about five years. At the end of nine months left Bournemouth alone and walked easily without crutches. Pyonex method. (3) Female aged 55. All joints stiff, painful, and swollen. Duration over four years. Told by several doctors could be relieved only. Had become much worse as time went on in spite of much spa and other treatment. Had to be helped in and out of a bath and so on. At the end of six months could get in and out of a bath unaided and carry a baby upstairs with ease.

DR. WILLIAM ARMSTRONG (Buxton) writes, in reply to the inquiry in the JOURNAL of March 29th, to put forward the following points: Counter irritation by repeated blisters or electric cautery is of great value; it should be spinal in the neural form of arthritis, as well as local; in the gouty or rheumatic form, local to joints only. It cannot, of course, deal with the reflex sources of irritation, but does undoubtedly improve the nerve nutrition of the joints. Radio-active water drinking, on the other hand, considerably increases the output of the various body poisons, and therefore acts upon the source of the complaint. The dose should be strong, not less than 5,000 m.u. per litre to commence with, increased to 10,000, and later on to 20,000. The inhalation of radium emanation with oxygen is also valuable. The ideal treatment, in my experience, is a combination of the two methods. The best method of counter irritation is by means of the electric cautery, the pain of which is mitigated by a preliminary ionization with cocaine.

LETTERS, NOTES, ETC.

SCARLATINIFORM RASH DUE TO VENICE TURPENTINE.

DR. CYRIL BANKS (Birkenhead) writes: I should like to corroborate Dr. William Angus's statement on the above subject by quoting a case I saw eighteen months ago whilst in temporary charge of a practice in Sheffield. A girl aged 19 had a typical finely punctate scarlet rash on the trunk and limbs. The face was flushed but free from rash. She had taken Venice turpentine—or "Veno's turpentine," as she called it—two days before to ease menstrual pain. The temperature was 99° F., as in Dr. Angus's case, but the throat was normal in appearance. There was a history of scarlet fever in infancy. I am unable to say whether desquamation subsequently occurred or not.

GENITAL FUNCTIONS OF DUCTLESS GLANDS IN FEMALES.

DR. A. COWAN GUTHRIE (Edinburgh) writes: I was much interested in the able article of Dr. W. Blair Bell on the above subject, especially where he states that "insufficiency of suprarenal secretion is the probable cause of osteo-malacia." In an undoubted case of osteo-malacia, where every other form of treatment failed to give relief, adrenalin chloride proved quite successful in bringing about a complete restoration to health. A full report of the case appeared in *The Prescriber*, November, 1909.

WASSERMANN REACTION.

THE SECRETARY OF THE WASSERMANN INSTITUTE, Sutherland House, Lloyds Avenue, London, E.C., writes: Owing to several inquiries received recently, and at the request of Geh. Med.-Rat. Professor Dr. A. von Wassermann, we beg to make the following declaration: At the inception of the Wassermann Institute, this title was chosen to express the fact that all Wassermann reactions conducted in our laboratory are made strictly in accordance with the original method and with reagents exclusively prepared under the control of Geh. Med.-Rat. Professor Dr. A. von Wassermann. The expression "under the superdirection of Geh. Med.-Rat. Professor Dr. A. von Wassermann," therefore, does not imply that Professor Dr. A. von Wassermann personally supervises the institute, but simply refers to the reagents used, as stated above. The examinations are supervised by one of the best known specialists in venereal diseases in London, and we can, therefore, guarantee that any tests submitted to us will be carried out with the greatest care and in accordance with the original technique advocated by Professor Dr. A. von Wassermann and with reagents controlled by him.

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